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AUGUST 1988
VOLUME 6
NUMBER 8

# FAMILY & HOME OFFICE COMPUTING™

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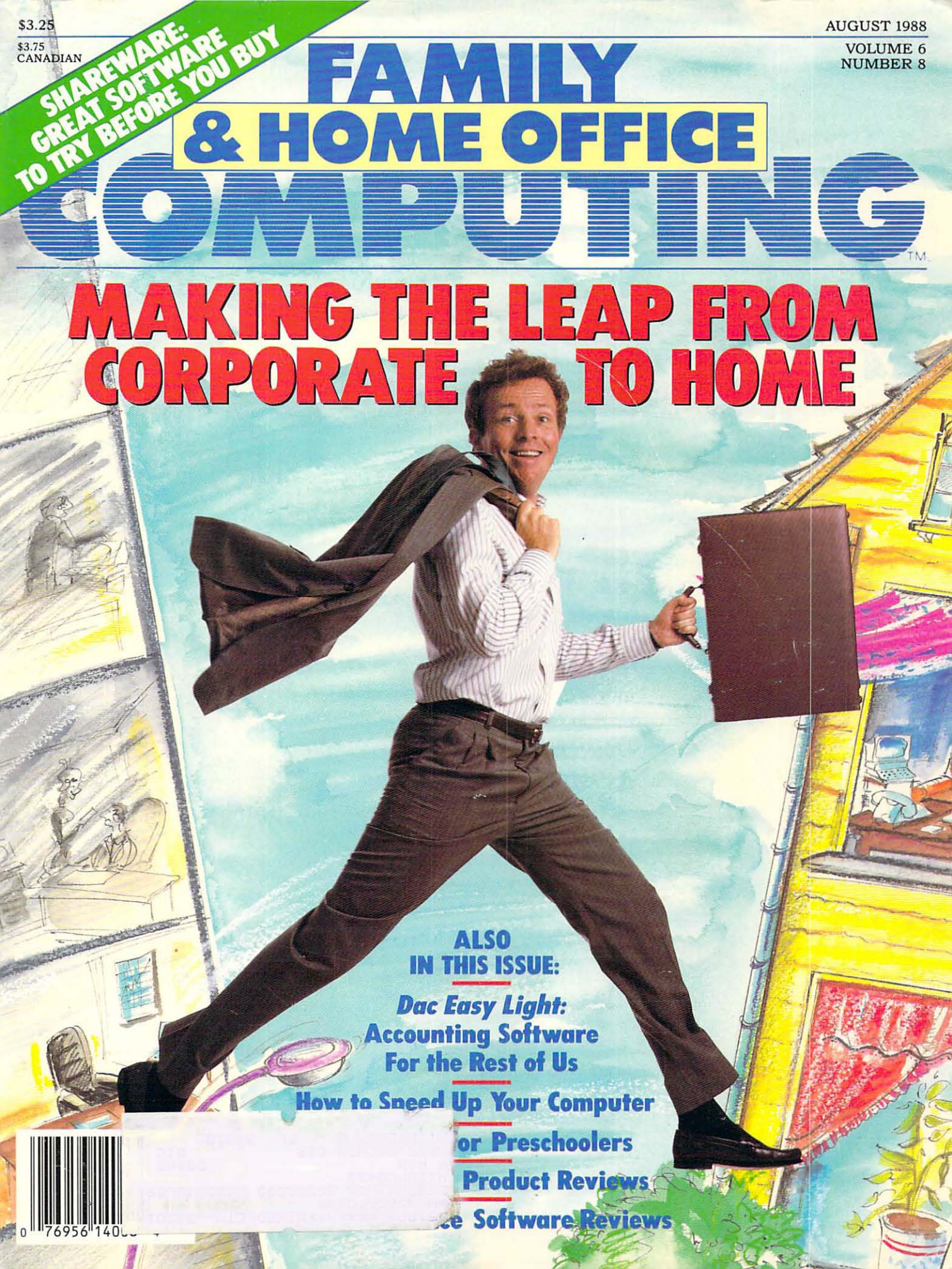

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How to Speed Up Your Computer

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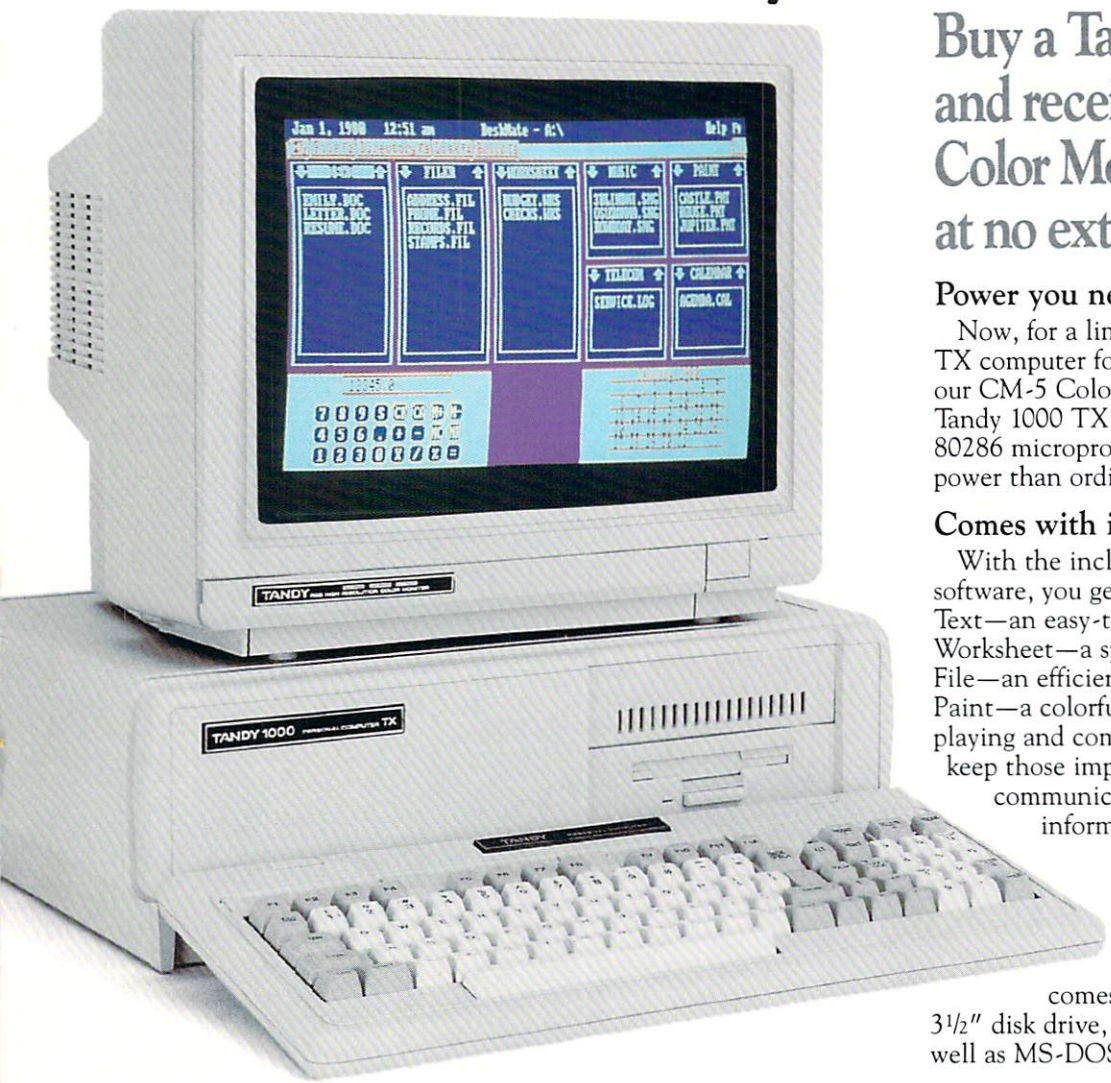


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Offer includes Tandy 1000 TX (25-1600) and CM-5 Color Monitor (25-1043). Monitor appearance may vary. Personal DeskMate 2 communications require modem. Intel/Reg. TM Intel Corp. IBM/Reg. TM IBM Corp. MS-DOS/Reg. TM Microsoft Corp. Sale begins 6/21/88, ends 8/23/88.

CIRCLE READER SERVICE 26

# EDITOR'S NOTE
## FOLLOWING THE DREAM

When computers began to appear in American homes early this decade, one thing was clear: They weren't going to go away. Murkiness abounded—what would people use them for? Who would use them? Which brand or brands would people buy? Despite the confusion, everyone knew they were here to stay.

In fact, the popularization of the personal computer gave rise to a multitude of dreams. For many of those who easily mastered the technology, time lost all meaning when spent in front of the computer. Hours were devoured by programming sessions devoted to creating games or graphics or any original computer-generated composition.

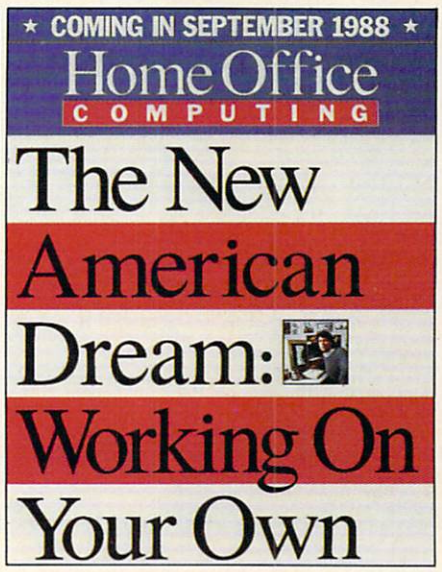
Game-playing marathons became the obsession of droves of computer enthusiasts, often to the dismay of their friends and family. Some players harbored fantasies of inventing their own hit game as a road to fame and fortune.

Neither of these groups gave much thought to the usefulness of the technology or to its practical applications. They were in *love*.

As speculation rose as to how the computer's power could benefit society at large, many concluded that it would revolutionize education. Millions of parents believed that the computer would help their children learn more, better, and faster, without understanding how. This was a new kind of dream.

Naturally, the hopes that computers would improve the ways we learn were shared by educators and parents. Visionaries continue to search for a means by which the technology can make these dreams come true.

Over these past five or six years, a different dream has been taking shape. It is one that grew out of the workplace, where increasingly powerful computers and versatile software were making it possible for people to improve their productivity and to expand their capabilities. Using word-processing, spreadsheet, and database programs became the norm for millions. Sophisticated documents integrating words, numbers, and graphics were easy to create and were effective tools for communicating to management, to clients, to employees, and to co-workers.




The price of the technology decreased dramatically, and the availability and acceptance increased. It became possible to have the same power on a desktop at home as on the desk at work. Why put in late hours alone at the office, when work could be done at home after an enjoyable meal with the whole family?

For some exhausted executives this alone was a dream come true. Others, though, had another vision. Why not spend days at a time at home—uninterrupted and more productive—connected to the office by phone or modem? Some workers stayed away by the week. And they too often thought they were in heaven. Stay home, send in the work, collect the paycheck.

Yet another dream was taking shape. Computers and copiers, fax machines, and feature phones were planting seeds for new declarations of independence, for a new generation of independents.

Doing productive work at home. Working on your own: The new dream is here. That's what readers are telling us. Americans are reviving old pioneering traditions. They are reaping the benefits of the technology for themselves, making it work their own way, setting their own terms and hours. And they are strengthening ties to family and friends.

The sophistication of the machines makes it possible for the individual to produce the highest quality professional work. Lone entrepreneurs are competing against large corporations—and winning. It *is* a dream come true.

Starting in September, FAMILY & HOME OFFICE COMPUTING becomes HOME OFFICE COMPUTING. September's issue, a celebration of our fifth anniversary, will be a theme issue devoted to "The New American Dream: Working on Your Own." It will feature helpful advice for those who work at home; marketing tips; success stories to serve as role models; resources to consult; shopping information on the dream machines and best software; and an exclusive interview with Alvin Toffler, author of *Future Shock* and *The Third Wave* and the futurist who saw the coming of the "electronic cottage." And it will also retain a "Family Computing" section devoted to learning and leisure articles, news, and reviews.

This section, addressing the home context of the home office, will appear each issue and will help people as they integrate work and home.

For the millions of Americans trying this new way of life, we will serve as a personal consultant. Month after month we will be there, providing help with important issues facing people who work at home. This is your new dream.

We're following your dream. Watch for that September issue, shown above. In it you will learn more about how, together, we can make your dreams come true.

Claudia Cohl

CLAUDIA COHL
EDITOR-IN-CHIEF

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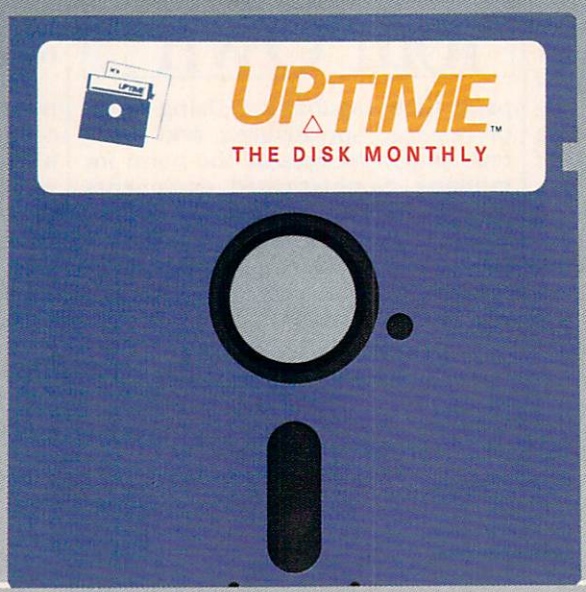


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PUBLISHED BY SCHOLASTIC INC.

AUGUST
1988

VOLUME 6
NUMBER 8

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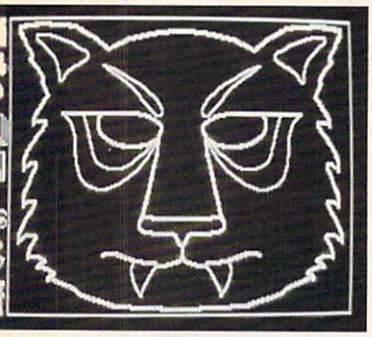

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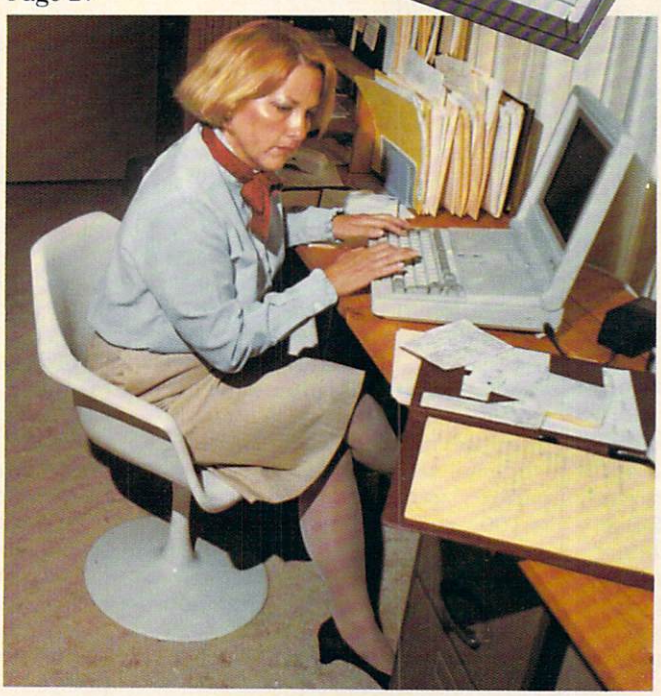

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FAMILY & HOME-OFFICE COMPUTING (ISSN 0738-6079) is published monthly by Scholastic Inc., 730 Broadway, New York, NY 10003. Subscriptions: in U.S., 12 issues for $19.97; Canadian and U.S. possessions add $6.00 per year for postage; foreign residents add $8.00 per year. Printed in U.S.A. Copyright © 1988 by Scholastic Inc. All rights reserved.

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*COVER ILLUSTRATION BY BEATA SZPURA*

# LETTERS

## A MAGAZINE FOR THE HOME OFFICE—& THE FAMILY OFFICE

My wife and I are considering starting a home business and find the information in your magazine invaluable. Keep up the good work.

JOHN TARDY
*Laurel, Maryland*

I have been a loyal subscriber to your magazine for three years now. I would just like to tell you that you are doing an excellent job and to keep up the good work!

MICHAEL MEHLBERG
*Clintonville, Wisconsin*

EDITOR'S NOTE: *See this month's Editor's Note, page 1, for details about our forthcoming name change from* FAMILY & HOME-OFFICE COMPUTING *to* HOME-OFFICE COMPUTING, *starting next month. Along with increased coverage of small-business and home office topics, you'll find a special "Family Computing" section where we will continue to support leisure and learning activities.*

## RIGHT ON THE *MONEYMATE*

After having been "burned" by an expensive, well-known money-management program—for which backup help was non-existent—I was led by your publication to *MoneyMate*, by Practical Software, Inc.

I am thrilled to have a money-management system that is simple, straightforward, and yet powerful. *MoneyMate*'s documentation is excellent and designed for people like me who know nothing about accounting. Practical Software's toll-free hot line is exactly that—someone usually answers on the second ring! And the company is marvelous at helping us beginners. I feel that *MoneyMate* couldn't be improved.

KENITH W. TEMPLIN
*Redmond, Washington*

EDITOR'S NOTE: *Practical Software recently released version 3 of* MoneyMate, *for which there is telephone support—though it's not toll-free ([813] 447-3100). You should also be aware that technical support for version 2 has been discontinued.*

## *PROCOMM PLUS* IS THE REAL WINNER

I really liked "Got My Modem Working," a review of popular telecommunications programs compiled by your editors, in your March issue. Senior Editor Nick Sullivan picked *ProComm* as his favorite MS-DOS telecommunications software, which is what I used to use. I swore that nothing could beat *ProComm*, until I saw the latest version: *ProComm Plus*.

It is even more fast, fluid, and efficient. The Host Mode is extraordinarily enhanced by the new and improved functions. This amazing piece of work buries its predecessor.

I do disagree with Mr. Sullivan on one point, however. I personally think that the "command files" (now called SCRIPT files) needed to automate a sign-on procedure are easily programmed. I'm sure he will be happy with the documentation in *ProComm Plus*, which extensively describes how to program these files using the language ASPECT.

Though we both thought that *ProComm* could not be improved, *ProComm Plus* proved us wrong.

CRAIG WORDEN
*Niagara Falls, Ontario, Canada*

EDITOR'S NOTE: *You're right! I like the feature you mention and now use* ProComm Plus. —N.S.

## PREPARING FOR SOFTWARE PURCHASES

I have just recently become aware of your magazine and enjoy it thoroughly. Have you written any articles that pertain to purchasing software—the pitfalls, if any, to watch for, if different software packages have different hardware requirements (laser printer versus dot-matrix printer), or just any other necessary questions that should be asked so there are no surprises after the purchase has been made? Also, when software is listed as "IBM compatible," is it safe to assume that it is 100-percent compatible?

MARY LOU CYPHER
DONALD B. CYPHER & ASSOCIATES, INC.
*Saxonburg, Pennsylvania*

EDITOR'S NOTE: *See "Shopping for Software: Sensible Steps for Finding What's Right for You" in the June 1987 issue. The article answers most of your questions and is a good guide for new software purchasers. (Back issues are available for $4.25 each—one to four copies—from* HOME-OFFICE COMPUTING, *Back Issues, P.O. Box 717, Cooper Station, New York, NY 10276-0171.)*

*And software listed as "IBM compatible" will usually run on an IBM PC or 100-percent compatible. Check with the publisher of the program or your dealer for specifics.*

## MAIL-ORDER BUSINESS

In response to "Disaster #3" from "Mail-Order Buying Guide" in the May issue, here are a few hints to ensure prompt service:

1) The United Parcel Service will make three delivery attempts before returning your package. At each attempt, a delivery notice will be left.

2) If UPS made the delivery attempt, it will not help to call the Post Office, because UPS is a private business, not a branch of the U.S. Postal Service. However, you can get a prompt answer by calling your United Parcel Service number, which is probably listed in the White Pages of your telephone directory.

3) Use your full name and address. Include house or building number, street name, apartment number, and correct zip code. P.O. Box numbers do not help because UPS is not part of the Postal Service.

4) If a delivery notice is left, complete it and put it in the same place you found it. You may leave further instructions for UPS to deliver the package to another address, to leave it at your door, or to hold it for you to pick up. Or call the toll-free number right away.

5) Under certain circumstances, UPS can leave your package even if you are not home: for instance, if you live in a single family residence with a porch, doorway, or garage where the package will be safely out of weather and will not be visible to passersby. This can be done unless the package contains a label saying *signature required*. Also, if the item is coming C.O.D., you will need to leave the C.O.D. amount in an envelope where the driver would find it or be present when the driver arrives.

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..... STEVE LEVEN, COMMODORE MICROCOMPUTERS

*"...Big Blue Disk offers games, educational programs, product reviews, programming utilities, and even commercial programs. We had more fun than an ant at a picnic, and we're going to subscribe!...RATING: ■■■■ Value for Money'* (4-stars) ..... FAMILY COMPUTING

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- **Directory Label Printer** Generate labels for disks listing filenames.
- **Fireworks Construction Kit** Create your own simulated fireworks shows.
- **PC-Key-Draw** *Complete* professional drawing program from OEDware.™
- **The "DETAB" Command** Converts tabs to multiple spaces when printing text files.

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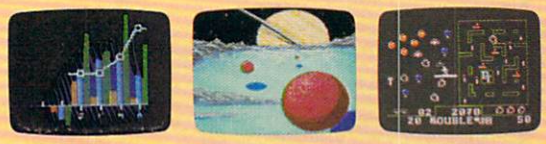

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CIRCLE READER SERVICE 16


# LETTERS

I have worked for United Parcel Service for six years now and I have seen how hard everyone works to see that a delivery is completed. *The most important* factor is a complete, legible delivery address.

JOYCE LYNN LOVELACE
*Ithaca, New York*

CORRECTION: *On page 56 of "Mail-Order Buying Guide" (May), the tip on how to avoid lost UPS packages should refer you to UPS, not the Post Office.*

## THANKS, SULLIVAN, FOR YOUR HUMOR!

Some 30-odd years ago, when computers belonged only to hobbyists with brain damage, I finagled my way into getting a computer kit and, thus, became interested in reading and writing computer articles. I've come to the conclusion that modernization, sophistication, and competitive greed definitely buried computer humor. Writers of the fore were strictly eggs-and-bacon-for-breakfast writers. Nowadays, most writers obviously eat sour grapes . . . with the exceptions including your Nick Sullivan.

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ROYCE CHESHER
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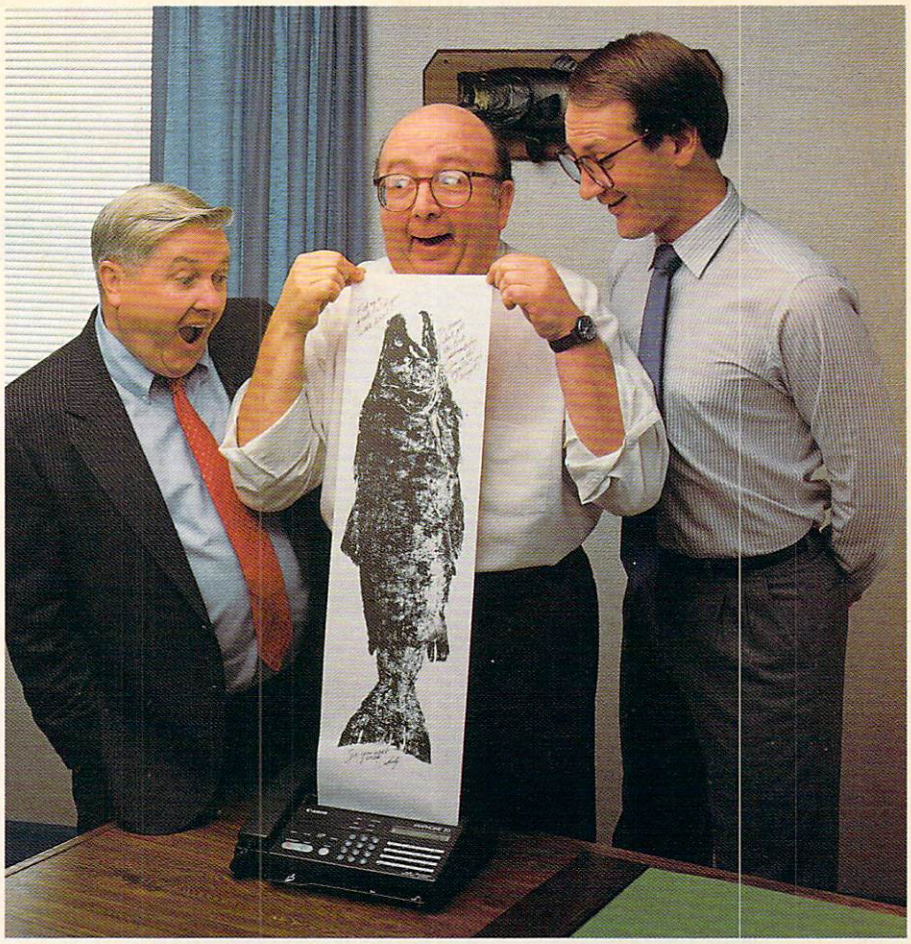
Dividing Work Between Home and Office

Service/Cost Comparison: Modem, Fax, Overnight Express, and the U.S. Mail

Small, Light Equipment for the Portable Office

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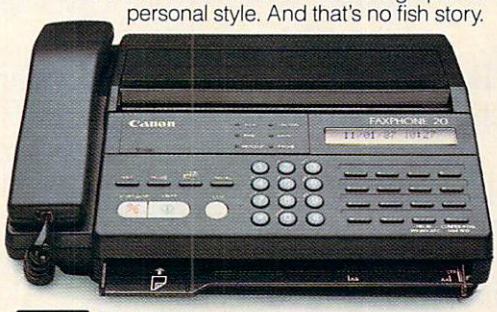
[1]Based on CCITT#1 Test Chart

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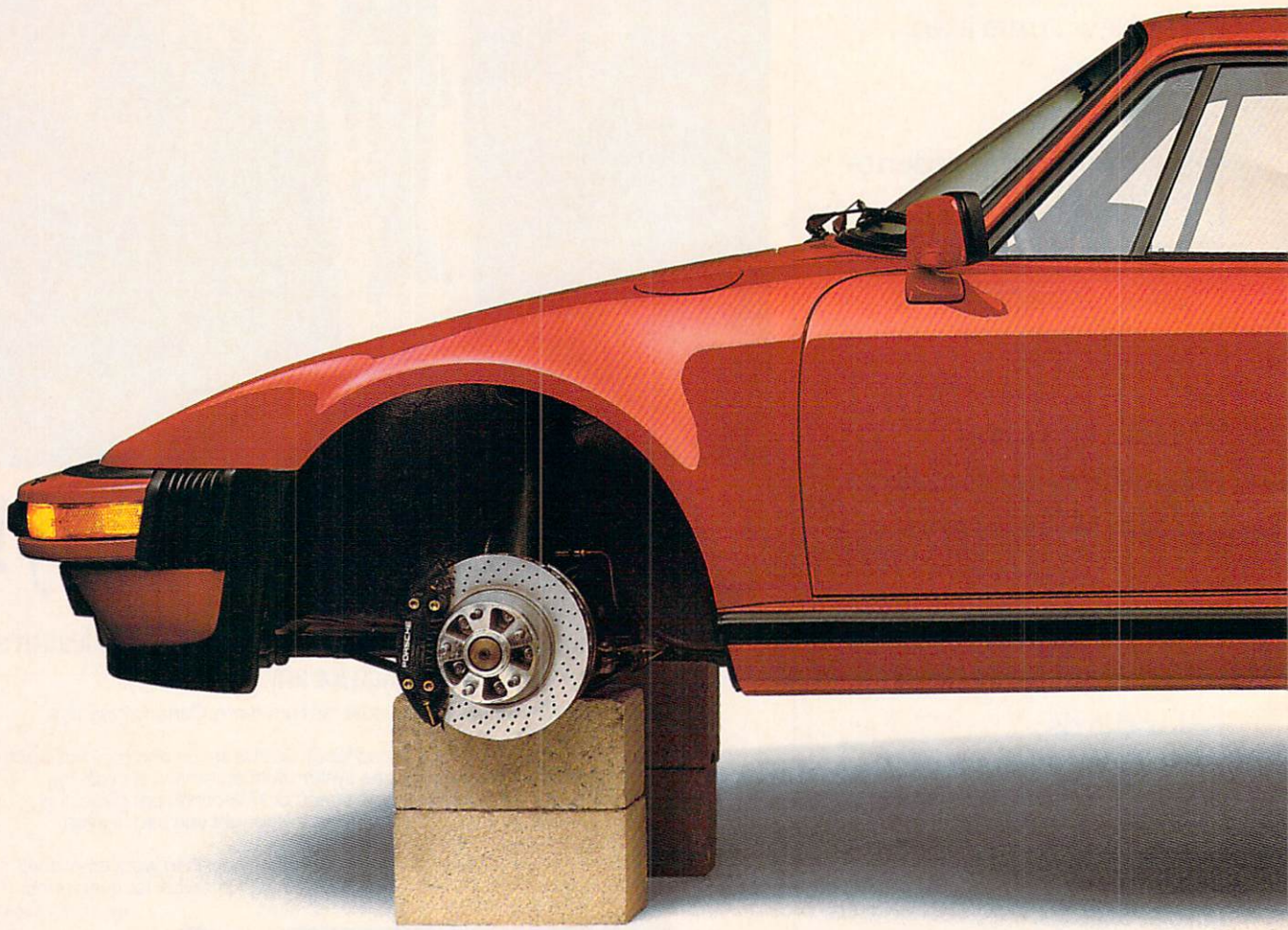
CIRCLE READER SERVICE 37

# Some Apple II owners still




It's like listening to Beethoven's 9th on a transistor radio. Or watching the Super Bowl on a five-inch screen.

Sure, your Apple II probably seems great just the way it is. But until you boot AppleWorks® 2.0, you won't really know what it's capable of doing.

AppleWorks combines three of the most popular applications in one powerful, easy-to-use package: a sophisticated word processor for swiftly creating dynamic marketing plans or compelling letters home to mom. A spreadsheet for compiling everything from next month's sales forecast to last month's household expenses—then changing the numbers in a flash as you ask questions like "what if I win the lottery tomorrow?" And finally, a database manager to store, sort and organize just about any kind of information you can think of.

Alone, each of these programs is a potent, practical tool.

But put them all together and your Apple II is suddenly traveling in a fast lane you didn't even know existed.

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**Wouldn't this ad look great as a poster, mounted over your Apple II? We've got them and they're a steal at U.S. $7.00 including postage, handling and tax. Allow 2 to 3*

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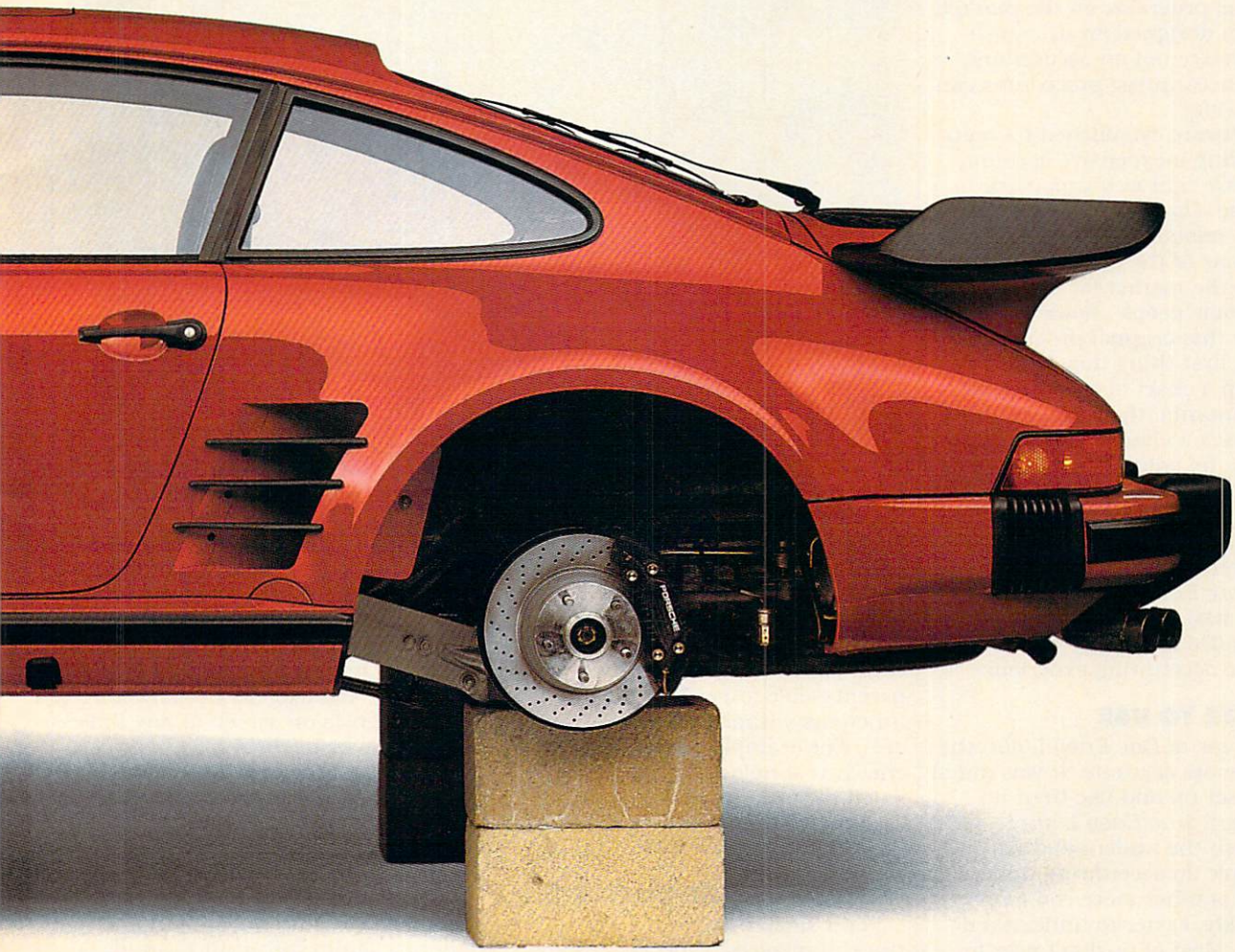


You can zip from your stock portfolio to your monthly budget with a few deft keystrokes. Cut sales projections from a spreadsheet and paste them into a business plan in a matter of seconds. Or use the mail merge function to speed addresses from the data base to a form letter. All without swapping disks or rebooting. Even the learning process is accelerated, since you only have to learn one set of commands.

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# FINANCE

## A REVIEW OF *DAC EASY LIGHT*

## An Accounting Package for the Rest of Us

**BY STEPHEN MILLER**

Accounting is one of those necessary evils with which many small-business owners must contend. Thank goodness that the task is a natural for computerization.

But although there are numerous accounting programs on the market, most seem designed for accountants. If you're not an accountant, standard accounting procedures can be perplexing.

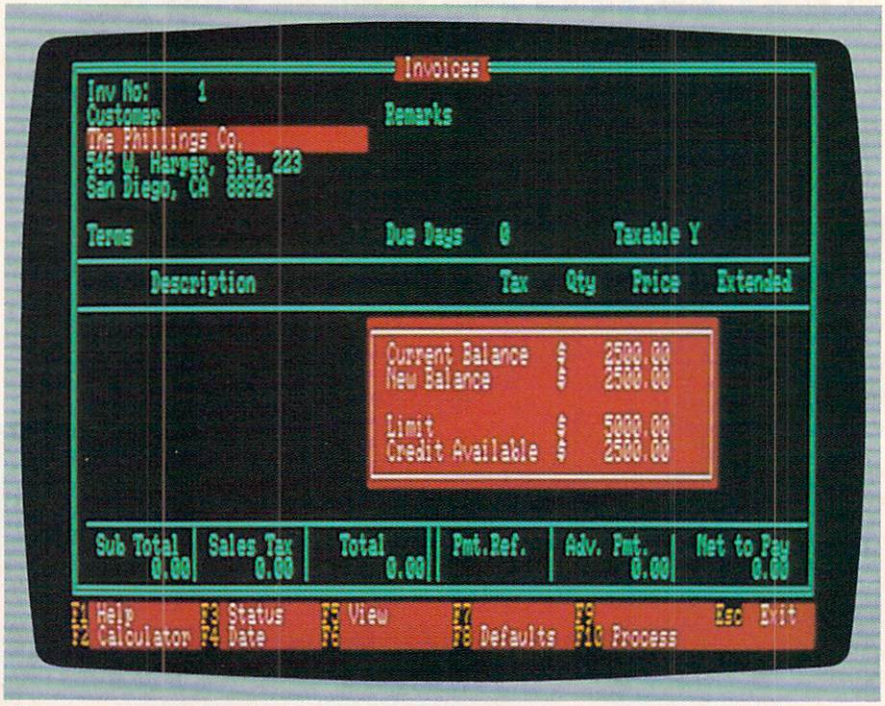
Dac Software established its reputation selling inexpensive accounting software that was supposedly easy to use. *Dac Easy Accounting* (not to be mistaken with *Dac Easy Light*) is one of the best-selling programs on the market for small businesses. Some people, however, were put off by this original program because the first thing they had to do was set up a chart of accounts. As nonaccountants, their first question was, "What's a chart of accounts?"

More to the point, all that accounting jargon scared people away from most accounting packages (not only *Dac Easy*). Dac Software has answered that criticism with the release of *Dac Easy Light* ($70), for the 256K IBM PC, a program specifically intended for people who have little or no accounting experience.

### A BREEZE TO USE

In the case of *Dac Easy Light*, the "easy" is more accurate. It was much easier to set up and use than its counterpart. *Dac Easy Light* is designed with the understanding that most people do accounting under the guise of other more common and, frankly, easier-to-understand activities. Most of us don't post to Accounts Payable or General Ledgers; we write checks and list them in our checkbooks. At the end of the month, we don't prepare Balance Sheets; we reconcile our checkbooks.

When you run the initial Setup program, the program automatically establishes the other components of an accounting package—General Ledger, Accounts Receivable, and Accounts Payable, for example. The screen layout is clean and has a list of options at the top (Banks, Reconcile, Credit Cards, Invoices, Accounting, Print, and Quit) that become pull-down menus with options.




**When you fill out an invoice for a customer, *Dac Easy Light* automatically tabulates the new balance.**

I believe that properly designed accounting software should be transparent—able to perform most of its functions without your being aware of it. For example, if you write a check, it should simultaneously be listed in your checkbook. Most of *Dac Easy Light*'s accounting functions are transparent operations.

### KEEP TRACK OF BUSINESS

For a small business, keeping track of invoices, especially receivables, can be a problem. *Dac Easy Light*'s invoices option is quite flexible. I like the fact that you can enter the invoice information at any time, though you don't have to print it until you're ready. This allows you to prepare all your customer or client billings as you go along but actually print and mail only once or twice a month, depending on your billing cycle. It's also easy to reprint invoices, if necessary. (Dac Software sells both preprinted and customized forms to give your invoices a professional look.)

Another important function of accounting is the generation of financial statements. These reports are key to tracking the financial health of your business. *Dac Easy Light*'s financial reporting capability is outstanding. You can call up a number of the reports on-screen at any time (as well as print them out)—everything from a Balance Sheet to a Variance Report (the difference between your budget and your actual expenses). Having immediate access to these reports can keep a home-based business out of trouble.

I really like *Dac Easy Light* and find few faults with it. It is an ideal accounting package for both business and accounting novices. My one complaint is more of a personal annoyance about Dac Software's support policy and has nothing to do with the quality of the company's software. You have 10 minutes of "getting started" telephone support (toll free); after that time, you'll have to purchase an extended support service contract to get additional help at an 800 number. Fortunately, *Dac Easy Light* is so straightforward that you probably won't have to call at all. ■

---

STEPHEN MILLER *wrote "How to Keep Track of Thousands of Details" in the July issue.*

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Back to Basics: Professional is powerful enough to handle all your accounting needs. Yet quick and easy enough so you can get back to the real business of *making* money. And at just $199, Back to Basics: Professional is a small investment that pays off in big ways.

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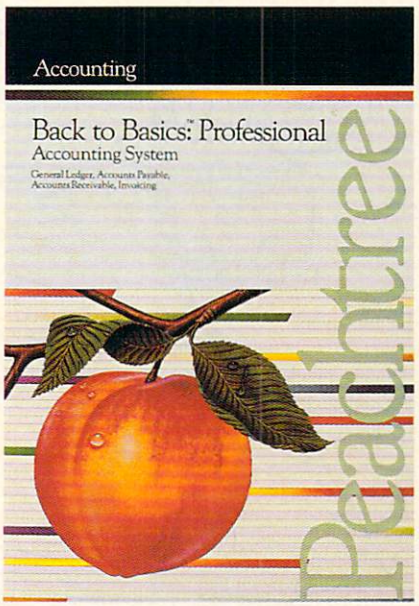
**Get All The Power You Need.** Back to Basics: Professional is designed for small businesses that are new to accounting, but it's not an accounting package you'll quickly outgrow. It can be used for both cash and accrual methods of accounting and combines the ease of a "no experience required" system with the versatility of four modules you can integrate fully or operate independently:

- General Ledger
- Accounts Payable
- Accounts Receivable
- Invoicing

**Get Control Over Your Money.** Back to Basics: Professional uses the double-entry method of accounting, which protects you by requiring that all entries balance before they are recorded. The Accounts Receivable module tracks the money customers owe you, calculates aging, applies finance charges, and adds past due messages to your statements.

The Accounts Payable module keeps up with what you owe suppliers, and calculates a Cash Requirements Report to help you manage your cash flow. Transactions from both modules are automatically recorded in the General Ledger, which computes balances from all transactions and prints reports such as Income Statements and Balance Sheets.

The Invoicing module allows you to create and print custom invoices specially developed to accommodate the needs of small service businesses. The result is more control over where your money goes, and what it's used for.




General Ledger, Accounts Payable, Accounts Receivable, Invoicing

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**For IBM and Macintosh***

**System Requirements:**
**IBM** PC, XT, AT, PS/2 and true compatibles with minimum 128K RAM; PC-MS/DOS version 2.0 or greater; standard 80 column printer. A minimum of 2 disk drives; a hard disk is recommended for best results. **Macintosh** 512K, 512Ke, Macintosh Plus, Mac SE, Macintosh II; ImageWriter or LaserWriter (LaserWriter cannot print checks); and a minimum of 2 disk drives. A hard disk is recommended for best results. *NOTE:* Hard disk is required for Mac 512K.

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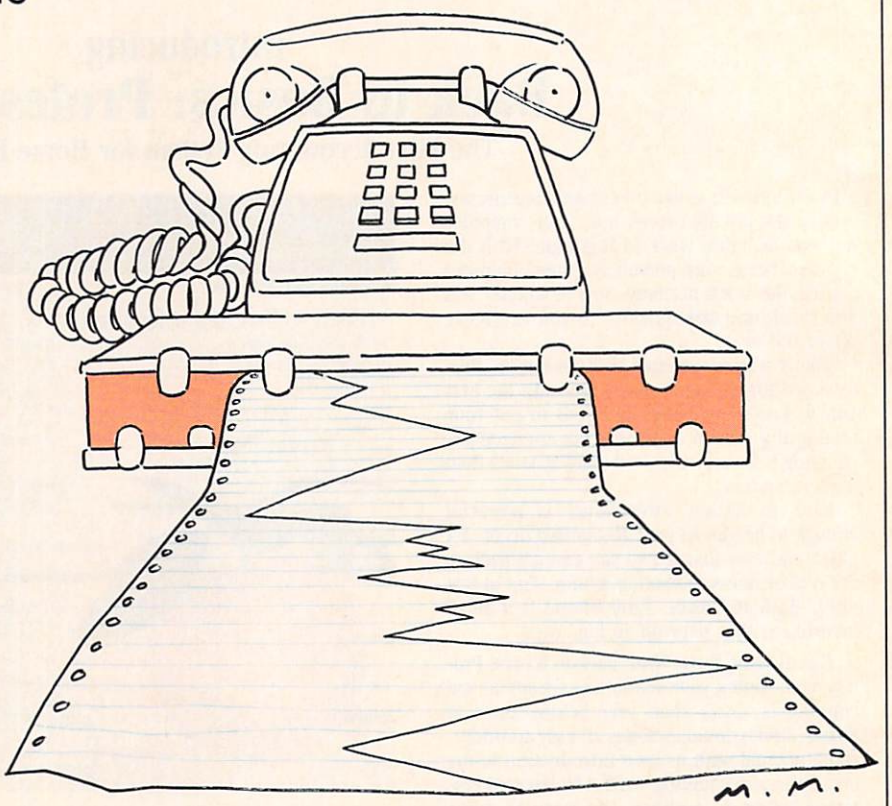
CIRCLE READER SERVICE 18

# TELECOMPUTING

## THE COMPUTER AS FAX MACHINE

## Add-Ons Let Your IBM or Macintosh Send and Receive Facsimile Documents

**BY DANA BLANKENHORN**



For many people, fax (or facsimile) technology has become a necessary part of business. Indeed, it's very common these days to see fax numbers on business cards—maybe even your own card. Facts, figures, letters, and lists are just a few examples of the kinds of information that are fed into fax machines and sent in an instant to anxious clients. And because fax machines are easier to use than modems, they are becoming widespread in businesses of all types and sizes.

Since more and more work is being done at the computer, add-ons called fax boards (or fax/modems) for the Macintosh and IBM PC and compatibles are becoming a popular way to send and receive fax documents from computer to computer or from computer to fax machine.

What follows are answers to the questions that computer users often have about fax boards.

**Q: What is a fax board?**
**A:** A fax board is a card for IBM PC and compatibles that fits into an open slot. The card usually comes with memory-resident software that allows you to convert text and certain graphics files into fax format, which then can be sent to another fax board or to an external fax machine. The board will also receive transmissions from any third generation standard (Group III) fax machine, which you can later display or print.

**Q: What are the system requirements for a fax board?**
**A:** First of all, you need a free slot for the board. A hard-disk drive is usually required, both to store the fax-board software (which can take up to 500K) and to store the incoming fax files, which can be long. One page of graphics, for instance, can take up about 900K. A page of text can take up 25K–30K, compared to 2K as a word-processor file.

DANA BLANKENHORN *is an Atlanta-based writer specializing in communications.*

**Q: How is a fax board different from a modem?**
**A:** A fax board can send files to and receive files from a fax board or stand-alone fax machine. A modem can only send files to and receive files from another modem.

**Q: When does it make sense to use a fax board instead of a modem?**
**A:** When the person on the other end has a fax machine and not a modem.

**Q: Are fax boards more difficult to use than modems?**
**A:** No, since the basic procedures are similar. Fax boards, however, are generally more difficult to integrate into your system.

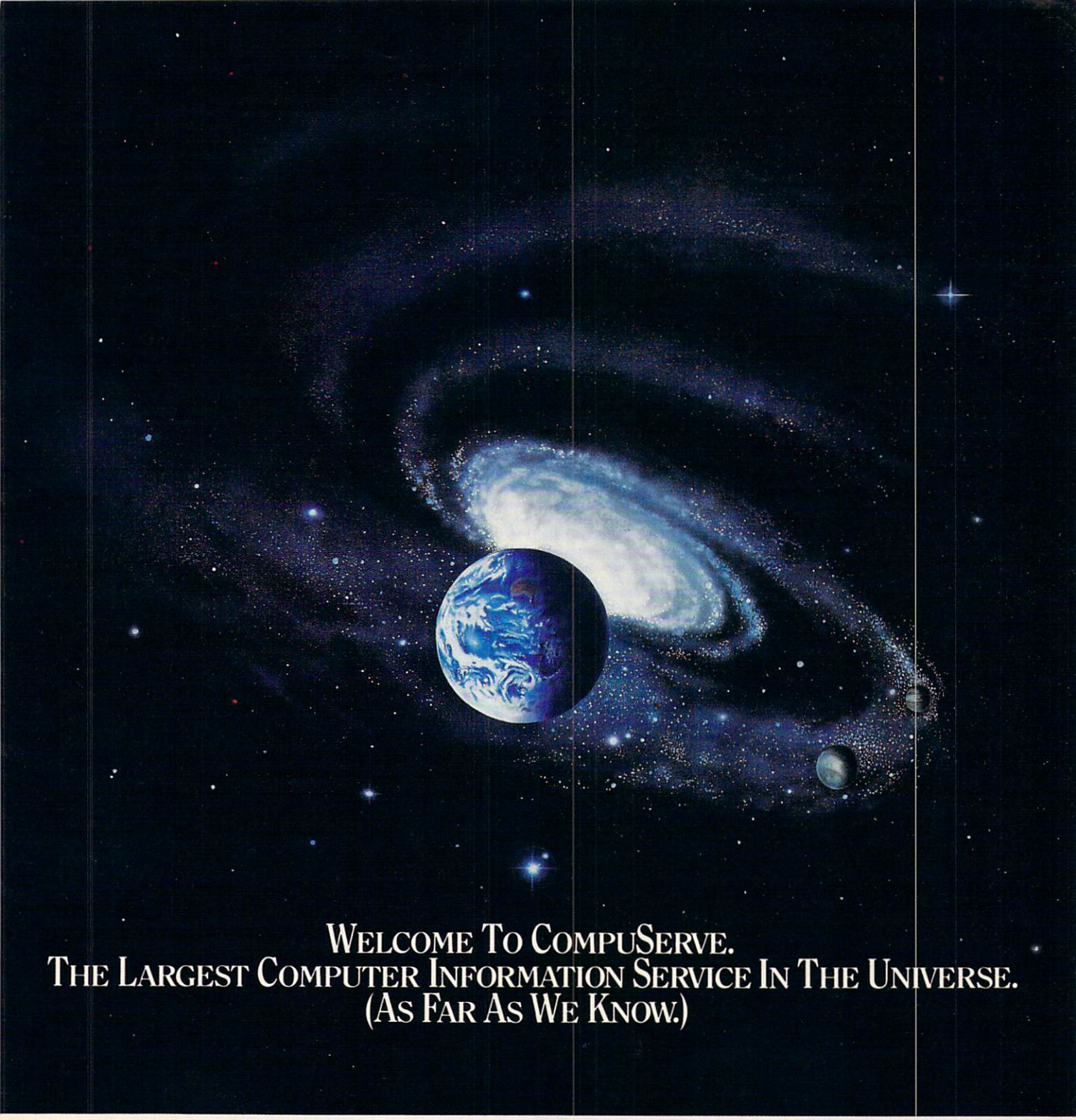
To receive graphics, for instance, the fax board must have, within its accompanying software, a driver that supports your monitor. If you will be printing out graphics, the software must also support your printer. Also, a modem can transfer almost any file it receives into a word-processing file, but a fax board needs special software *(see below)* to make the translation.

**Q: Can I use a fax board as a modem as well?**
**A:** In some cases you can, but in general, the two products are different. (The Datacopy PC and AppleFax Modem double as modems.)

**Q: When does using a fax board make more sense than using a fax machine?**
**A:** When sending: With electronic files you don't have to print your document before transmitting it. When receiving: Electronic files won't bury your office in paper and keep confidential memos and letters away from others' eyes.

**Q: If I receive a page of text with my fax board, can I edit it in my word processor?**
**A:** Not unless you have some kind of OCR (Optical Character Recognition) software, which can cost anywhere from $150–$500. A fax file is made

ILLUSTRATION BY MONA MARK



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CIRCLE READER SERVICE 34

## A FAX BOARD SAMPLER

The following is a list of fax board terminology and products. Most of these boards are designed to work with an IBM PC or compatible, but a Macintosh-compatible device is produced by Apple, and JT Fax plans one for the fall. (The AppleFax Modem for the Macintosh is not a card, but an external device.) All of them support the following features unless otherwise noted.

**ASCII–Fax Conversion:** Converts ASCII files into fax files for transmission.

**Background Mode:** Allows you to use your computer for other tasks while your fax board is sending or receiving files.

**Display Support:** CGA, EGA, and Hercules monochrome.

**Full-slot Card:** The board occupies a full-length slot on the motherboard.

**Group Transmission:** Lets you send multiple files to multiple locations.

**OCR Support:** Can convert a fax file into ASCII with the proper software although most don't include OCR software in the purchase price.

Many also support various printers and scanners, and a few offer support for desktop publishing and graphics systems.

**APPLEFAX MODEM**
Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014
Phone: (408) 996-1010
$699

An external device for the Apple Macintosh. Operates in background mode and permits unattended group transmission. Two cables are required if connection with peripherals is desired.

**FAX PARTNER**
Panasonic Industrial Co.
Two Panasonic Way
Secaucus, NJ 07094
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Fax: (813) 643-5070
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Phone: (617) 235-3026
Fax: (617) 235-0310
$499 for 9600 baud; $449 for 4800 baud; $399 for 2400 baud

Installs easily. Includes a built-in word processor and a program called *Supershow* for manipulating fax images and creating files with your letterhead and signature.

**GAMMAFAX**
Gammalink
2452 Embarcadero Way
Palo Alto, CA 94303
Phone: (415) 856-7421
Fax: (415) 494-7042
$995

Installs easily. Allows unattended transmission. Supports standard graphics formats.

**JT FAX**
Quadram Corp.
One Quad Way
Norcross, GA 30093
Phone: (404) 923-6666
Fax: (404) 564-5740
$395

A good basic fax board at a good price. Converts and sends ASCII files in one step. Doesn't operate in background mode, so your computer is tied up during transmission. Works in half and full slots and operates at 4800 baud. OCR software is not supported. An external device for the Macintosh should be available at this time.

**MICROFAX**
Datacopy
1215 Terra Bella Blvd.
Mountain View, CA 94043
Phone: (415) 965-7900
Fax: (415) 965-3474
$1,195

One of the most complete systems available for connecting with desktop-publishing setups, this fax board also doubles as a modem. Installation is a little tricky.

**PATH II**
Pitney Bowes
One Elmcroft Place
Stamford, CT 06926
Phone: (203) 356-5000
Fax: (203) 351-6304
$1,395

Unlike many other fax boards, OCR software is included for easy conversion of fax files into ASCII format. Works well with most word processors and has a pull-down menu user interface.

**SMARTFAX**
American Data Technology
44 W. Bellevue Drive, Suite 6
Pasadena, CA 91105
Phone: (818) 578-1339
Fax: (818) 578-1264
$949
Includes a world map, list of area codes, and more. You can receive but not send in background mode.

up of tiny dots, which are arranged to form characters. A word processor can read only a full character, not a collection of dots. OCR software translates the dots into characters.

However, the translation process can be difficult. Most OCR software has a library of fonts; it tries to match the dot patterns to fonts, but can't always do so without mistakes.

**Q: Can I use a fax board to transmit a page from this magazine?**
**A:** Not unless you have a scanner *(see "Buyer's Guide to Scanners" in the July issue)*. A scanner reads text and graphics from paper into the computer, where they can be turned into a fax file and sent via the fax board.

**Q: Can I use a fax file in a graphics or desktop-publishing program?**
**A:** The software included with most fax boards has specific drivers that are able to translate fax files into standard graphics formats such as *PC Paintbrush*. Few support specific desktop-publishing programs such as *PageMaker*.

**Q: What kind of printer do I need to print out a fax file?**
**A:** You need a dot-matrix or laser printer, since these printers build characters and graphics from dots, just as the file is received. A daisy-wheel printer will not work, unless you can first translate the fax file into an ASCII file.

**Q: Will fax transmissions interrupt my computer's operations?**
**A:** Usually not. Most fax boards operate in background mode. The software is memory resident and ready to receive calls. However, you may not have full control of your computer while the fax board is working; the board's software may take over your disk drive when it saves or sends a transmission and will generally slow the system.

**Q: How do I choose the best tool for communications?**
**A:** It depends almost entirely on the way you work and how comfortable you are with new technology. Fax machines are by far the easiest method of sending and receiving data, but if that data is stored on the computer, a fax board is the way to go. And if you want to be able to edit files with your word-processing program, make sure you can use OCR software. Also keep in mind that fax boards that double as modems take up only one slot. ■

# PREMIUM.

**pre'mi·um** (pre'·me·am) *adj.* 1) very high value. 2) top grade. 3) highest quality possible.

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CIRCLE READER SERVICE 12

# MACHINE SPECIFICS

## NEWS, OPINIONS, QUOTES, AND RUMORS ABOUT YOUR FAVORITE COMPUTER

## APPLE

BY CHARLES H. GAJEWAY

### APPLE II

StyleWare is a company that became successful by creating a good product—the *MultiScribe* word processor—then relentlessly improving it and developing an impressive array of accessory products.

**GSWorks Like a Dream.** It looks like StyleWare has done it again with *GSWorks*, an impressive multifunction program that uses the capabilities of the IIGS to provide six popular productivity functions in a flexible, Macintosh-like windowing environment. Besides the word-processing, database, and spreadsheet functions found in *AppleWorks*—which are incorporated into *GSWorks*—it provides communications, a graphics module featuring a combination of draw and paint attributes, and a full-featured page layout application.

In addition to such advanced features as the Merriam-Webster Proximity spelling checker/thesaurus, the program has fonts, color text, mail merge, and a mouse-based WYSIWYG graphics interface, making it easy and intuitive to learn and use. *GSWorks* can read *AppleWorks* word-processing, database, and spreadsheet files, so current GS-based *AppleWorks* users can switch to the new program without losing any of their files and templates.

*GSWorks* was introduced at Boston AppleFest in May. Based on the demonstrations, it is one of the most exciting GS-specific releases I have seen in some time. As soon as I can get my hands on a production copy, I'll try it out and let you know how it works in a real-world environment.

**No Cheap Chips.** Big, complex programs such as *GSWorks* (or *PaintWorks Gold* or MIDI music programs) need a large amount of memory to perform effortlessly. There is no shortage of high-capacity memory boards out there, but unfortunately, the price of RAM chips increased drastically in 1988 because of tariffs on imported chips. Adding a megabyte of RAM suddenly carries a substantial price tag. Just a word to the wise: Don't plan on large memory expansions unless they are absolutely crucial. American suppliers are preparing to re-enter the market; when they do, prices will probably drop as supplies become more available.

### MACINTOSH

The memory chip shortage is really taking all the fun out of Multifinder. The situation is worse for Macintosh users; 256K chips are expensive, but the 1MB chips and custom chip arrays used to expand Macintosh memory are hard to come by. If you are planning to use Multifinder or memory-hungry graphics and desktop-publishing software, check with your dealer on RAM prices and availability before you head into a frustrating dead end.

**Multifinder Standard.** At Apple's Spring Developers Conference, the company outlined plans for evolving its Macintosh operating system. Under Apple's current plans, System 6.0 will soon be widely available. The word on the street is that it will feature a speed enhancement to Quickdraw—Quickergraf, a new keyboard macro facility—and increased background capabilities under Multifinder.

Multifinder will probably become the standard Mac operating system, replacing the current Finder (now termed Unifinder) with the year-end release of System 7.0. At that time, 2MB of RAM will probably be the standard minimum configuration. In addition, there will probably be a "smart clipboard" feature which will let you establish dynamic links between documents created by different applications. This is an exciting development, but we'll probably have to wait until System 8.0 to see it.

CHARLES H. GAJEWAY *can be reached on CompuServe* (ID: 73357,3577) *or on GEnie* (ID: C GAJEWAY).

## ATARI

BY MATTHEW STERN

Recently I heard a story that may signal a major change in the Atari market.

**WordPerfect.** A recent rumor hinted that WordPerfect was planning to discontinue selling its popular word processor, *WordPerfect*, for the Atari ST. The company had learned that copies of the program were on three pirate bulletin boards.

Because of the "overwhelming amount of support" for *WordPerfect* from CompuServe's Atari16 forum members, system operator Ron Luks called for an on-line conference.

At the meeting, Dan Lunt, WordPerfect's vice president of marketing, announced that WordPerfect would not abandon the ST after all. "We have not announced that we are withdrawing from the Atari market and have no current plans to do so," Lunt said. "We do have some concerns, but they are not limited exclusively to the Atari. Recent events have simply focused our attention, once again, on these concerns."

Software quality is one of WordPerfect's concerns. WordPerfect has admitted that errors exist in the initial release of the program, but says that the company is working to correct them. "We have had a number of problems with our release for the Atari machines," Lunt said. "It was released too early, and there were a lot of bugs. As soon as we realized what we had done, we took the steps we could to alleviate the situation." Since its release, WordPerfect has shipped four revisions—all free—to registered owners.

The cost has hurt WordPerfect. At $395, *WordPerfect* is competing with such word processors as Timeworks's *Word Writer ST* and *Microsoft Write*, which cost half as much, even though *WordPerfect* offers more features and toll-free technical support. "Perhaps the high price has hurt our sales level," Lunt said. "Someone suggested that we drop our price and eliminate toll-free support to cut our costs. That may appear to make sense in this market, but it is inconsistent with our way of doing business. I personally do not feel that reducing our level of service would help us in this or any other market."

Dealer support has been yet another drawback. According to Ashman, Atari dealers have not been re-

ceptive to WordPerfect's level of support. Only 131 of the 900 Atari dealers accepted a training package with a free copy of the program.

**Where was Atari?** The company that seems to be providing the least support, however, is Atari. Lack of manufacturer support has been a common complaint of many third-party vendors, including WordPerfect. "The third-party support that Atari has offered has been minimal," Ashman explained. However, Ashman pointed out, Atari has started to improve its support.

If a major developer left the ST market, especially one with as good a reputation as WordPerfect, Atari would lose credibility as a manufacturer of business computers. *WordPerfect* is the leading word processor for the IBM PC and has gained a considerable Macintosh and Amiga following.

NOTE: *With the magazine's new title* (see Editor's Note) *and its increased focus on home-office and business topics, we will be discontinuing the Atari column in Machine Specifics.*

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MATTHEW STERN *can be reached on CompuServe* (ID: 73547,2420).

## COMMODORE

BY SHAY ADDAMS

What budding GEOS programmer wouldn't kill for a Drop-Down Menu Construction Set? That's just one of the novel elements of BeckerBASIC, an extension to BASIC 2.0 that offers 273 programming commands. The system is divided into three individual programs. Another program (included with the package) converts your finished program into GEOS format so it can be run from the desktop.

**BeckerBASIC.** Fully compatible with GEOS, BeckerBASIC gives you the capability to write software (a solid background in standard BASIC is necessary) that employs the drop-down menus, icons, buttons, and other features of the GEOS interface, as well as hi-res graphics and sound. There are even statements for handling sprites—the graphic blocks that make programming animation so much easier on the C 64 than on many other machines.

One thoughtful touch concerns copy protection, which has no rightful place on a development system on which so much of your work depends. The disk is protected, but registered owners can get an unprotected backup for an extra $10. Written in Germany (don't panic—the 240-page manual is in English), BeckerBASIC is distributed by Abacus Software. In a contest that runs through August 31, 1988, Abacus is giving away $25,000 in prizes for the five best applications written with BeckerBASIC.

**Desktop Publishing Software Rolls In.** The wave of new desktop-publishing packages for the 64 continues to crash upon the shores of my desktop. *Outrageous Pages* is being replaced by a more powerful program, *PaperClip Publisher* (Electronic Arts; $50), which allows you to work on multipage files. It arrives with only five fonts, but will convert GEOS fonts (of which there are more than 50) so you can use them in your documents. If you want more clip art to use in either of these packages, each of the *Graphics Disk* sets from *Kids' Computer News* contains 100 pieces of art that are available in various formats: *Print Shop A* or *B*, *Newsroom*, *ScreenMagic*, *GEOPaint*, *Doodler*, *Koala Pad/Pen*, and *Printmaster*. The disks are $4 each. For more information, write *Kids' Computer News*, St. Hilda's & St. Hugh's School, 619 W. 114th St., New York, NY 10025. (This is also a good source for fonts, utilities, and other software for the Amiga, C 64, and C 128.)

NOTE: *With the magazine's new title* (see Editor's Note) *and its increased focus on home-office and business topics, we will be discontinuing the Commodore column in Machine Specifics. Commodore users will still be able to find entertainment and educational software reviews in the Family Computing section, which begins next month.*

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SHAY ADDAMS, *editor and publisher of* Questbusters, *an adventure-game newsletter, can be reached on CompuServe* (ID: 72267,601) *or on QuantumLink* (ID: JBCHALMER).

## IBM

BY HENRY BEECHHOLD

It may be that IBM has once again played the game too cautiously. The PS/2 line entered the world in a shower of glitzy advertising, but when we took a closer look, we saw that there was nothing spectacular about it, Micro Channel notwithstanding. The open architecture of the PC/XT/AT family allows you to turn a low-cost computer into a machine that will do almost anything that the PS/2s can do. And then there is the impending advent of the Intel 80486 (yes, a 486 microprocessor)! It may turn out that the current PS/2 line (already more than a year old) will prove to be no more than a passing fancy on the road to really serious computing power.

Nevertheless, IBM claims to have shipped 2 million PS/2 computers (mainly Models 30 and 50), and that should generate a healthy demand for software and new peripherals.

**WYSIWYGing.** If you have a Hewlett-Packard LaserJet printer, *softJET* (Theta System Corp.; $120) may be what you need to facilitate careful text-formatting. The program, which can run in either standalone or memory-resident mode, enables you to preview on-screen the layout and typesetting of your documents.

Invoking *softJET* results in a white paper representation of the document, one page at a time. You can leaf through the document at will, zooming in to examine details of type, graphics, and anything else that may appear on a printed page. It's precisely equivalent to looking at an actual printout, right down to shadings and cross hatchings. You can then return to the word processor for fine-tuning before running the document through the printer. You'll save both time and paper.

*SoftJET* will reproduce HP-compatible cartridge or soft fonts (up to 60 points) as well as any bit-mapped graphics images such as lines, shadings, logos, dingbats, and miscellaneous symbols done in HP printer-control language. Where mathematical accuracy in page design is desirable, the program provides a cross-hair ruler with an adjustable scale. It can zip through a document at up to about 40 pages a minute and will work with any 320K IBM PC/XT/AT, PS/2, or compatible and virtually any video-display board.

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HENRY F. BEECHHOLD *is author of* The Brady Guide to Microcomputer Troubleshooting & Maintenance *(Brady Books, Prentice Hall Press, New York).*

# MACHINE SPECIFICS

## MS-DOS

BY STEVE MORGENSTERN

What's .ARC? The first few files I downloaded from bulletin board services all had .ARC file name extensions and didn't run. Here's the deal: ARC is short for "archive." Archiving has two functions. First, several programs and documentation files can be combined into a single .ARC file and sent by modem as a unit. Second, data compression techniques are used to make the .ARC file shorter than the sum of the originals.

To use an ARC file, though, you first need a utility program that will extract and decompress files from the archive. No problem . . . almost any bulletin board with ARC files will also offer one of several archive extraction programs. Be sure to download both the archive utility and the .DOC file that explains how to use it. You can print out a copy of a .DOC file using your word-processor or the DOS PRINT command.

**MCA Clones.** April brought announcements of three forthcoming clones based on the controversial IBM Micro Channel Architecture (MCA) used in the Model 50, 60, and 80 PS/2 computers. Tandy says its 5000 MC will ship by midyear, while Dell and Olivetti both promise MCA models by year's end.

Unlike the clones of the original IBM PC and its descendants, which were based on off-the-shelf technology and were relatively easy to copy, the MCA system is legally IBM's alone. Hence, the clone manufacturers are all paying licensing fees to Big Blue for the privilege of following them down the Micro Channel.

The underlying question is whether computer buyers will convert to MCA as well. The new system is incompatible with the prevailing PC XT/AT hardware architecture, so a Micro Channel machine requires its own type of expansion cards, which command premium prices. The computers themselves are also more expensive than the "classic" systems.

And what benefits does the MCA provide? So far the answer is "just wait and see."

STEVE MORGENSTERN *can be reached on CompuServe* (ID: 72545,606).

## TANDY

BY STEPHEN MILLER

Tandy has been undergoing a profound change over the past couple of years, at least in its computer division, and I believe loyal Tandy customers or potential customers should understand what's happening at One Tandy Center.

**Strong and Getting Stronger.** As a long-time observer of the Tandy Corporation, it is clear to me that the company has realized it is a major player in the MS-DOS–OS/2 world and is acting accordingly. In 1987, Tandy sold more personal computers than IBM did. It ended that year with 23 percent of the market. Only Apple, with its hammerlock on the educational market, sold as many personal computers—also ending the year with a 23-percent market share. Tandy's range of MS-DOS computers is one of the broadest in the industry. It makes a computer to fit any need or budget. Nobody in the industry can come close to Tandy in the sheer number of its outlets; there are 366 Computer Centers and


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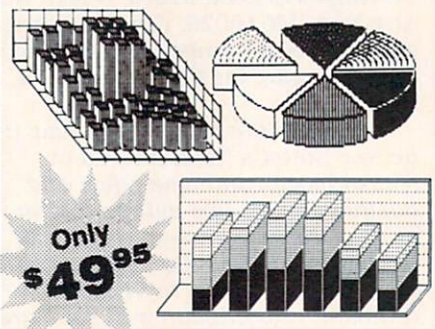

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CIRCLE READER SERVICE 20

7,058 Radio Shack stores. It has been my experience that no one gives better after-sales service to its customers.

**New Directions.** Tandy officials have always maintained that it is a marketing company, leaving unstated, but implied that it's "not an innovator." Tandy tended to be a follower in cutting-edge computer technology and was content to produce good products at competitive prices and sell all the market would bear. The quality, price, and volume equation hasn't changed, but Tandy has been subtly and not-so subtly innovating. The two most recent examples are its licensing of the *DeskMate* interface and its announcement of the erasable Compact Disk (CD).

**DeskMate Standard.** Tandy's integrated program, *DeskMate*, has been bundled with its 1000 series machines for years. Many people discovered that the program was easy to use but that its word-processing, spreadsheet, database, and communications programs were limited in power and sophisticated features. Tandy has decided to make the *DeskMate* interface available to other software developers on a cost-free licensed basis. Now people familiar with *DeskMate* will be able to use powerful programs without having to waste valuable time learning many new commands. Since *DeskMate* runs quite nicely on the slower MS-DOS computers and since there are hundreds of thousands of copies already on the market, it has all the ingredients necessary to be a standard.

It seems as though Tandy Corporation (which has $4 million in annual sales) has the clout to support a new standard, so software developers have jumped on the *DeskMate* bandwagon. These include Software Publishing, Activision, Electronic Arts, Intuit, Sierra On-Line, Broderbund, Epyx, First Byte, and Symantec. 3Com has already developed a local area network for Tandy that uses *DeskMate* as the interface and will also offer it to others.

**THOR CD.** Tandy departed from its usual practice of only announcing products that are ready to ship when it announced the first read–write CD-compatible optical disk that can be erased and rerecorded. The THOR CD technology is still a couple of years away from dealers' shelves and the first applications will be with audio CD's, but the implications for information storage are enormous. A 5-inch compact disk can hold 550MB of data or the equivalent of almost 1,400 5.25-inch floppy disks.

All of these changes at Tandy are good news for the consumer. Tandy is not only in the computer business for keeps, but is willing to push toward standardization, which can only make the user's life easier.

STEPHEN MILLER *is a computer consultant and journalist.*

## PHONE NUMBERS

Abacus Software (616) 698-0330
Apple Computer (408) 973-2222
Atari Corp. (408) 745-2000
Commodore (215) 431-9100
Electronic Arts (415) 571-7171
IBM Corp. (800) 447-4700
Kids' Computer News (212) 666-9871
StyleWare (713) 668-1360
Tandy (817) 390-3011
Theta System Corp. (604) 732-4323
WordPerfect Corp. (801) 225-5000

CIRCLE READER SERVICE 24

# EDUCATION

## SOFTWARE FOR PRESCHOOLERS
## Giving Your Youngster a Head Start

**BY WARREN BUCKLEITNER**

From dressing up in mom's high heels to posing in dad's reading glasses, children like to mimic their parents. Similarly, many children jump at a chance to use mom and dad's computer. Preschoolers, too, can get in on the action, especially if they're provided with imaginative, interactive, easy-to-use software.

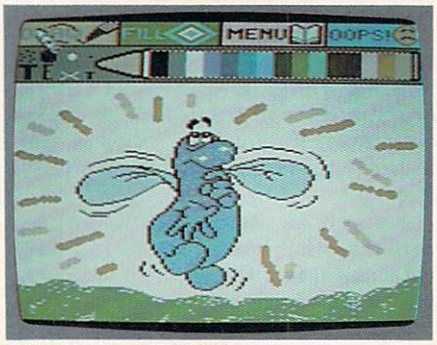
Computers can help children as young as 2 or 3 learn new concepts, practice skills, think and solve problems, and link symbols with real objects and events. There's a range of software—from workbook-style matching and counting activities to programs that stimulate creative artwork and story making—that is easy to use, strong in content, and designed with the special needs of young children in mind. Following is a checklist for choosing good programs, tips for getting your youngsters started, and a list of recommended titles that are most likely to turn preschoolers on to learning while having fun.

### TIPS FOR SELECTING QUALITY PRESCHOOL SOFTWARE

As with business applications, it's best to try before you buy when selecting software for your children. If possible, bring your preschooler to the store to test the software. Keep the following questions in mind:

- **Is it easy to use?** When you insert a disk and turn on the computer, does the program bring you to the main menu? After a brief introduction, children should be able to operate the program easily.
- **Is it interactive?** The package should require frequent reactions, decisions, or creative input from children.
- **Is it child-proof?** Does it allow your children's fingers (or an occasional elbow) to experiment with all the keys without causing a malfunction?

WARREN BUCKLEITNER *is an educational consultant and editor for the 1988 Survey of Early Childhood Software, published by High/Scope Education Research Foundation, a nonprofit research, development, and training organization.*




***Color Me* from Mindscape.**

- **Is it strong in content?** Does it help children learn more about the world?
- **Does this program have different levels of difficulty?** A program with varying levels of difficulty will continue to challenge your children as they make progress.
- **Is there variation in the content presentation?** Can children use the program over and over again and still find something new?
- **Does the program allow the child to be in control?** Children should be able to change the pace easily, pause, leave one activity for another, or stop altogether (usually by pressing the ESCAPE key).
- **Is it designed with features that allow parents to customize the program?** Parents may want to tailor the program's content to their children's needs (changing the level of difficulty and editing or inserting content, for instance).
- **Does the program provide positive reinforcement?** The best programs reward children for good answers and motivate them to continue, but do not punish them for incorrect answers.

### APPLE, IBM PC, MACINTOSH, OR ANOTHER?

Preschool programs are available for all computers. A color system is preferable because much of the impact of good preschool software comes from colorful graphics. Apple owners have the greatest selection of preschool software from which to choose. Some of these programs are also available specifically for the Apple IIGS, which offers enhanced sound and graphics. Like the Apple, the C 64/128 has been popular for many years, and consequently, the list of early childhood programs available for the C 64/128 is substantial. There are also a number of good programs for IBM PCs and compatibles, most of which require a color graphics card. The least number of preschool packages are available for the Macintosh, Amiga, and Atari ST.

### TIPS FOR STARTING YOUR CHILDREN ON THE COMPUTER

- **Explore the program yourself first.** Make sure it works with your system. Does it boot up easily?
- **Mark the important keys on the keyboard.** Place a little "stop sign" sticker on the ESCAPE key or pieces of plastic tape on the space bar and RETURN keys so that your children can quickly find the "action" keys employed by a program.
- **Provide "lap-top" support.** Spend time with your children, introducing the activities, playing with them, and discussing the answers. Working together with your children at the computer encourages them and is fun for everyone.
- **Make the computer an option for your preschoolers.** As with any other activity, interest will vary from day to day and month to month.
- **If possible, let your children change disks themselves—but keep a backup copy.**
- **Don't allow your children to eat or drink near the computer.**

### A SAMPLING OF RECOMMENDED PROGRAMS

There's plenty of good early childhood software available. Some are classic programs that continue to receive high ratings, and others are notable newcomers.

*Alphabet Blocks* is a phonics-based reading program that makes use of the Macintosh's speech capabilities. Children will learn letter names and sounds from a talking elf. (Bright Star Technologies; Macintosh, $50)

*Color Me* lets preschoolers draw, select colors, and write with Koala Pad, mouse, or joystick. (Mindscape; 128K Apple, C 64/128, 256K IBM PC, $30)

***Mask Parade* from Springboard.**

*Early Learning Series* includes four educational programs. *Learn the Alphabet* uses graphics to teach uppercase and lowercase letters, alphabet order, and simple words. *Learn to Add* teaches number recognition, number and numeral correlation, and counting and grouping for numbers one to nine. *Learn to Spell* teaches letter combinations for up to five-letter words. *Film Maker* (C 128 only, $7 each) stimulates creative artwork and story making by letting youngsters choose animation for short films. (Spinnaker; C 128, $7 each; 128K Apple, 128K IBM, $10 each)

*Early Games for Young Children* helps children learn concepts in early math and language skills by using colors, shapes, letters, and numbers. (Springboard; 64K Apple, C 64/128, 256K IBM PC, 128K Macintosh, $35)

*Fun with Letters and Words* encourages children to develop a vocabulary and to spell simple words by typing them on the keyboard. (Wescott; IBM PC, $20)

*Getting Ready to Read and Add* teaches shape discrimination and letter and number recognition using colorful graphics. (Sunburst Communications; 48K Apple IIGS, 16K Atari, C 64/128, 64K IBM PC, $65)

*I Love My Alphabet* instructs youngsters to match uppercase and lowercase letters through color recognition. (First Star Software; 128K Apple, $35; 48K Atari, C 64/128, $30)

*Kid's Stuff* helps children learn letters and simple words through matching and typing. A free-typing section provides extra practice in vocabulary, spelling, and word association. (Stone and Associates; 64K Apple, 512K Atari ST, 128K IBM PC, $40)

*Kindercomp* presents a mixture of learning activities based on drawing, scribbling, matching uppercase and lowercase letters, and counting. (Spinnaker; C 64/128, $21) Also available, *Kindercomp Golden Edition* (48K Apple, 64K IBM PC, $40)

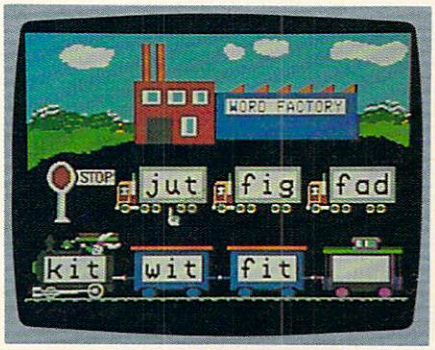
*Mask Parade* lets children choose parts of the face, such as the eyes and nose, to design and print masks, badges, jewelry, and other cutouts. (Springboard; 48K Apple, 128K IBM PC, $40)

*Math and Me* teaches shape, number, and pattern recognition and addition of single-digit numbers. (Davidson & Associates; 128K Apple, 256K IBM PC, $40)

*Mixed-Up Mother Goose* encourages children to find missing pieces to popular rhymes. Characters come alive in animation through music, text messages, and pictures. (Sierra On-Line; 512K Apple IIGS, 256K IBM PC, $30)

*Number Farm* includes six entertaining games that teach children to count. In one game, children count sounds. (DLM; 48K Apple, C 64/128, 256K IBM PC, IBM PS/2, $33)

*Reader Rabbit* stresses early reading and spelling skills while building youngsters' vocabulary through word and letter patterns and concentration and memory skills. (The Learning Company; 64K Apple, C 64/128, 256K IBM PC, $40; 256K Apple IIGS, $60)




***Reader Rabbit* from The Learning Company.**

***Stepping Stones* from CompuTeach.**

*Reading and Me* teaches reading readiness, the alphabet, phonics, word recognition, and simple sentences. (Davidson & Associates; 128K Apple, 256K IBM PC, $40)

*Talking Text Writer* is a popular talking program that teaches sound and symbol correlation and encourages independent reading and writing. Children can type in a page of text, and the computer will read it back. (Scholastic, Inc.; 128K Apple, 256K IBM PC, $188, $250 with Echo board)

*Stepping Stones* is composed of two parts, *Levels I* and *II*. *Level I*, a three-part program, teaches letter recognition, letter combination, and counting. *Level II*, also a three-part program, teaches children to match words with pictures, to learn basic addition, and to build sentences. (CompuTeach; 64K Apple, 256K IBM PC, 512K Macintosh, $40)

*Stickybear Opposites*, *Stickybear Shapes*, *Stickybear ABC*, and *Stickybear Numbers* is a popular series that teaches opposites recognition, shapes recognition, and familiarity with the alphabet and numbers. (Optimum Resources; 48K Apple, $40 each; C 64/128, 48K Atari, $30 each; *Numbers* also for 128K IBM PC, $40)

With good software, computers can be valuable learning tools for children, starting in preschool years and continuing on throughout their lives. Because youngsters participate in determining the action and deciding what will happen next, they learn more from computers and interactive software than they do from such passive activities as watching television. And this sense of control, developed early in life, stays with children forever.■

## PUBLISHERS' INFORMATION

Bright Star Technologies (206) 885-5446; CompuTeach (800) 44-TEACH, in CT (203) 777-7738; DLM (800) 527-4747, in TX (800) 442-4711; Davidson & Associates (800) 556-6141, in CA (213) 534-4070; First Star Software, 666 Lexington Ave., Mount Kisco, NY 10549; Hartley Courseware (800) 247-1380, in MI (517) 646-6458; Mindscape (800) 221-9884, in IL (312) 480-7667; Optimum Resources (800) 327-1473, in CT (203) 542-5553; Scholastic (212) 505-3000; Sierra On-Line (800) 356-5252, in CA (800) 344-7448; Spinnaker (800) 826-0706, in MA (617) 494-1200; Springboard (800) 445-4780, in MN (612) 944-3915; Stone and Associates (619) 459-9173, in CA (800) 621-0852; Sunburst (800) 431-1934, in NY (914) 769-5030; Wescott (312) 328-1367

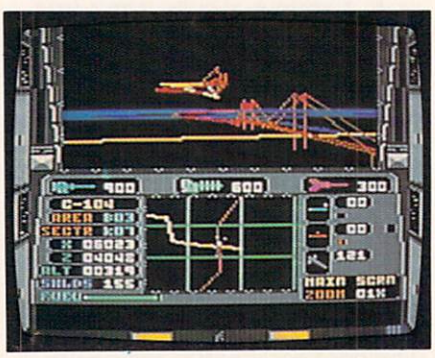
# ENTERTAINMENT

## HINTS, NEWS, AND NEW GAME FORMATS

## NEWS AND RUMORS

★ **Pete Rose**, the hot-tempered **Cincinnati Reds** manager, teamed up with **Gamestar**, a division of **Activision**, to create ***Pete Rose Pennant Fever*** (**512K IBM PC**, $40; a **C 64/128** version is planned), a 10-season, 24-team-league race for the Pennant. The game puts you on the diamond where you'll pitch, hit, run, field, throw, and steal. Or you can choose the role of team general manager, calling pitches and plays, determining the lineup and making substitutions, drafting and acquiring players, and controlling finances and salaries. . . . Activision has three other new games: Protect U.S. interests in major hot spots from the Bering Sea to Southeast Asia and the Persian Gulf in ***U.S.S. Ocean Ranger*** (**C 64/128**; $35; an **IBM PC** version is planned), which incorporates the best elements of both action and simulation games. ***Predator*** (**C 64/128**; $30) is a shoot-'em-up game based on the movie of the same name. And ***Main Event*** (**C 64/128**; $30) is a wrestling simulation.

★ **Access Software**'s ***Echelon 3-D Space Flight Simulator*** (**64K Apple**, **C 64/128**; $45–$50) lets you control the future's most advanced combat and exploration spacecraft, the *C-104 Tomahawk*. You'll maneuver the vehicle, fire state-of-the-art weapons, encounter hostile enemy spacecraft, and explore unknown terrain. The Lipstik Access, a voice-activated control headset, is included in the C 64/128 package *(see review in this issue's Software Guide)*.




***Echelon 3-D Space Flight Simulator*, from Access Software.**

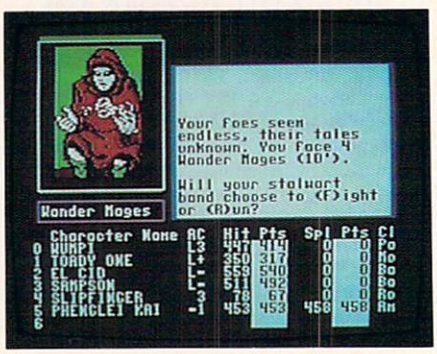
★ Here are two more sports simulations to hit the market, both from **XOR Corporation**. ***PRO Challenge*** (**256K IBM PC**, **512K Macintosh**; $50) puts you in charge of an NFL team and tests your coaching ability. Choose the coaching style that suits you best: conservative, aggressive, or balanced. The game weights players' passing, running, receiving, kicking, and blocking abilities based on their height, speed, weight, and experience. ***Basketball Challenge*** (**256K IBM PC**, **512K Macintosh**; $40) also weights players. As the coach of one of 20 college teams, you set the game tempo, call the plays, and pick the shooter and the shot. Player fatigue, substitution, jump balls, and fouls contribute to the realism of *Basketball Challenge*. . . . In ***Oligopoly*** (**384K IBM PC**; $50), another game from **XOR**, you'll build a petrochemical, manufacturing, electronics, or textile empire. Travel to 52 countries and face workers' strikes, factory nationalization, earthquakes, kidnappings, and shipping problems as you expand your holdings in the market. . . . ***Bermuda Square*** (**256K IBM PC**, **512K Macintosh**; $30) is a game based on the mathematical equation $1^1 + 2^2 + 3^2 + \ldots + 23^2 + 24^2 = 70^2$. Players must fit 24 different-sized squares with dimensions ranging from 1-by-1 to 24-by-24 into a larger square on the computer measuring 70-by-70. XOR is offering $5,000 in prize money for the best solution submitted by March 1, 1989!

★ **PCAI**, a software company dedicated to designing **Macintosh** games, has released its first space adventure, ***Lunar Rescue*** ($60). In a quest for the stolen control crystals that maintain the lunar defense network, you'll buy and sell commodities at the Trade Central stations, earn lunar currency to replace ships, and buy supplies for the search. Explore terrain and debris and defend yourself with lasers, space cannons, bombs, and decoys. . . . And PCAI has released ***MacGolf 3.0***, an upgrade for current ***MacGolf*** owners. The new release has enhanced graphics, is compatible with large-screen monitors, and runs on a hard drive. Owners of both *MacGolf* ($60) and ***MacCourses*** ($35)—a disk of four additional courses—can upgrade through PCAI ([612] 427-4789) for only $5 (for shipping and handling); *MacGolf* owners can upgrade for $35, plus the $5. —LISA WU

**Tee off in *MacGolf 3.0*, an upgrade for *MacGolf* owners.**

## GAME HINTS

***THE BARD'S TALE II: THE DESTINY KNIGHT*** (Electronic Arts). In this fantasy role-playing game, you must gather the seven segments of the powerful Destiny Knight. The segments are protected by monsters and by the Snares of Death—puzzles




**Gather the seven segments of the *Destiny Knight* in *The Bard's Tale II*.**

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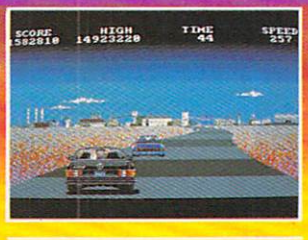


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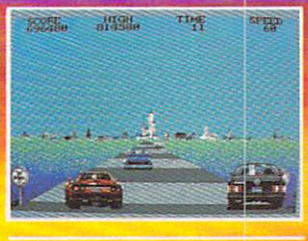


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DREAM-UP / 45.84.29.79

that you must solve to save your party from death. (512K Amiga, 128K Apple, C 64/128)

Some items to be found in The Destiny Stone:

* Angra's Eye #7: Casts Batchspell.

* Aram's Knife: Can be thrown to inflict 300+ damage points and always returns to the thrower. It sells for 30,000 gold coins.

* Ring of Return #3: Casts Safety Spell.

* Holy Hand Grenade: Casts Mangar's Mallet.

* Trick Brick #30: Casts Wizard's Wall.

* Dragon Wand #80: Breathes at opponents to inflict damage.

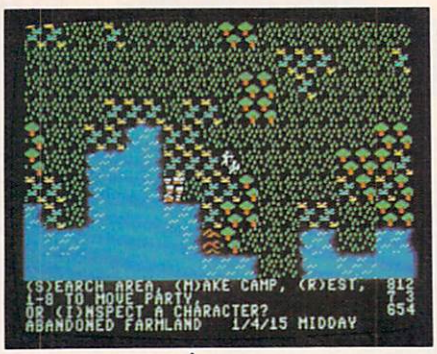
* Brothers Kringle Figurine: Summons the Brothers Kringle.

* Dragon Figurine: Summons a Dragon.

* Segment #7: Summons the Brothers Kringle.

—HOUSTON CLAUDE
*Issaquah, Washington*

***THE ETERNAL DAGGER*** (Strategic Simulations, Inc.). Participate in a quest




***The Eternal Dagger*, for 64K Apple, 48K Atari, and C 64/128.**

that spans several continents and takes you up in the skies, over land and sea, and even deep underwater. *The Eternal Dagger* won FAMILY & HOME-OFFICE COMPUTING's 1987 Critics' Choice Award for best role-playing adventure. (64K Apple, 48K Atari, C 64/128)

* Transferring weapons is useful, especially when combined with drain.

* IXL, ROLF, and WNPT are names to remember.

* Be nice to the family of dwarfs. If you aren't, you'll regret it.

* Save the game before following tracks (probably to a treasure hoard). If you don't like what you get, you can turn the computer off and reload the game to change the pool.

* Before entering Avlis's Tower, make sure you have some spare coppers for "entrance fees."

* Watch for illusory walls in the dungeons.

* Awareness is helpful on the Elven Continent.

* Racial patrols can be a quick supply of equipment or a quick death.

* After defeating the Necromancer, travel to Greenbay for a nice surprise.

* When fighting High Demons, watch for one that casts spells quickly. Kill this High Demon as soon as humanly possible.

* If you battle the Demon Bear, be prepared for a tough fight.

* Beware of the center of the Underwater Dungeon.

—MICHAEL GARNER
*Jefferson, Louisiana*

***SILENT SERVICE*** (MicroProse). It's World War II, and in this stimulating submarine simulator, you're a United States submarine commander in the Pacific. Hunt down and sink convoys while avoiding attacks. (256K Amiga, 64K Apple, 256K Apple IIGS, 48K Atari, 256K Atari ST, 128K IBM PC)

**In *Silent Service*, command a U.S. submarine in WWII.**

* Attack ships from broadside to give yourself maximum target size.

* Unless there is a destroyer coming right at you, sink cargo ships and tankers with the deck gun, and save the torpedoes for bigger game.

* When engaging destroyers in battle, surface, fire two deck-gun shells, and submerge immediately to avoid hits. Keep doing this until you sink the destroyer.

* If many enemy ships surround you, disable all of them before you start to sink them.

* To avoid a depth charge, attack-dive to 320 feet. Go to the radar map under maximum zoom. Proceed at flank speed, and use full left or right rudder to evade destroyers positioned directly above you.

* If you have enough time when shooting, use the aft torpedoes first, and save the bow torpedoes for quick aiming and firing.

* If a destroyer is hitting you infrequently (six seconds between hits), rig the sub to run silently, and submerge until you are within 20 feet of maximum depth.

* When you are hit by depth charges, press the surface key. Do not blow the emergency tank until your sub approaches 20 feet of its maximum diving depth.

* When destroyers are hunting for you, rig the sub to run silently, and submerge at least 300 feet. Eject debris to fool destroyers.

—BYRON NG
*Vancouver, British Columbia, Canada*

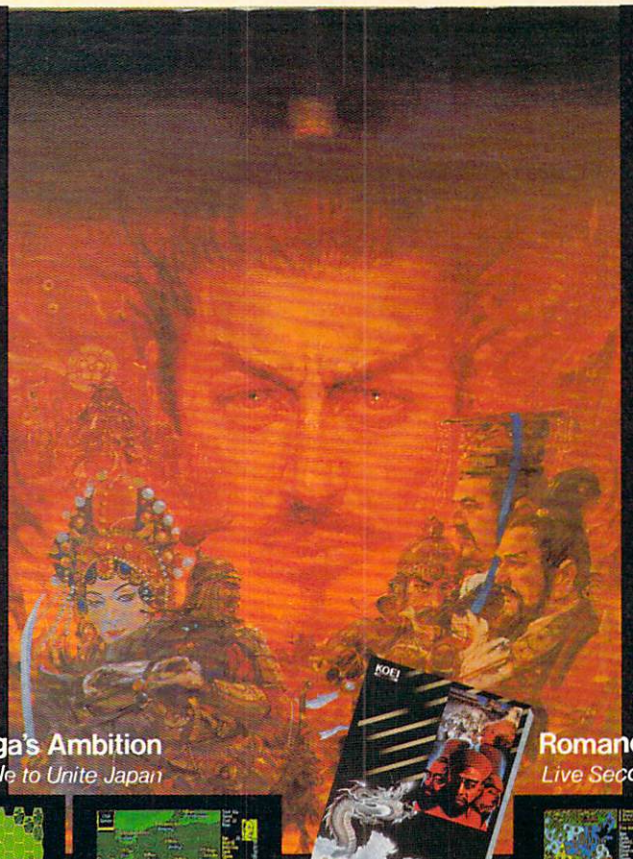
## CONVERSIONS

***4th and Inches*** (Accolade). Now available for 512K Amiga, 512K Apple IIGS, 256K IBM PC, 512K Macintosh. Already out for C 64/128. Reviewed in June issue.

***The Last Ninja*** (Activision). Now available for 128K Apple, 512K Apple IIGS, 512K IBM PC. Already out for C 64/128. Reviewed in February issue. ■

KOEI

# More than five years a best seller

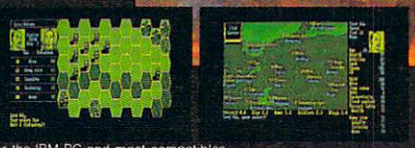


# Greatest simulation game released in Japan

$59.95

## Nobunaga's Ambition

*The Struggle to Unite Japan*



For the IBM PC and most compatibles.

The Japan most people don't know about. The Warring States period of the sixteenth century. Central government was weak and ineffective as feudal lords called daimyos gained power. Each daimyo ruled a single fief, each wanted to rule the nation. One man, Nobunaga Oda, came close but failed. He paid the price for failure, death.

Nobunaga's Ambition is a military, economic and diplomatic simulation for one to eight that puts you in Nobunaga's place, or in the place of one of his rivals. You start with one fief and try to take the entire nation. A game of both strategy and tactics, success takes careful planning and opportunism.

Administer your fiefs during peace to increase their strength. Keep your peasants and army loyal or risk revolt. Use your resources effectively, not spending too much on either guns or butter. Negotiate with other daimyos, or perhaps you'd rather just send ninja.

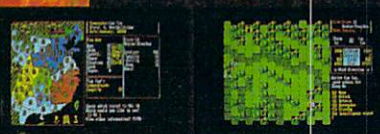
On the battlefield, control your troops in close tactical detail. Take advantage of terrain, attack, retreat, fight a war of attrition or go directly after the enemy general. Just be sure your side is smarter, tougher and better prepared.

Nobunaga's Ambition is fast moving and easy to play but historically accurate. Characters and game events come from the reality of sixteenth century Japan. Maps are almost entirely accurate, both geographically and politically. Advanced graphics and animation help give the game a feel of complete reality. One to eight may play either of two scenarios and five different levels of difficulty. Instruction manual and historical notes included.

$69.95

## Romance of The Three Kingdoms

*Live Second Century China*



For the IBM PC and most compatibles.

China's second Han dynasty has collapsed. The entire nation battles with itself as warlords struggle for supremacy. You are a Master, one of these warlords determined to beat out the others and control the country.

Manage the states under your control to increase their power and resources. Cope with disasters, both natural and otherwise, when they occur. Choose good subordinates and win their loyalty. Negotiate with other Masters, or take a less diplomatic approach, controlling your armies and those of your generals in great tactical detail on the battlefield. Take advantage of terrain as best you can. Choose the right kind of attack for the situation, or just try and trick the enemy. Do what the immediate situation calls for but don't fail to think ahead.

A huge data base together with advanced graphics, animation and programming give the game an unprecedented degree of reality. Romance of The Three Kingdoms is based painstakingly on the Chinese epic novel of the same name, but is fast moving and easy to play. Features include:

*255 characters, each with a distinct personality
*Military, economic and diplomatic simulation
*Five different scenarios
*Ten levels of difficulty per scenario
*Play by one to eight
*Demonstration mode
*Complete instruction manual and historical notes.

**Some comments from Japan's leading computer magazines:**

"If you own a computer you've got to try this game".
*OH! PC*
January, 1987

"If the user can supply intelligence and imagination, Nobunaga's Ambition will provide more and better entertainment than any other game on the market".
*Enter*
August, 1986

"First released more than five years ago, Nobunaga's Ambition is still not just a best seller but one of the very best simulation games on the market".
*Popcom magazine*
January, 1987

"Nobunaga's Ambition is the absolute pinnacle of simulation gaming".
*Mainichi Shimbun*
May 7, 1987

"A great hit"
*Asahi Shimbun*
February 20, 1986

"Far and away the most authentic simulation game I've ever seen".
Hiroharu Seki, professor of Political Science at University of Tokyo in an interview with *Tokyo Newspaper*.

"Our highest accolade to Koei's Romance of The Three Kingdoms".
*Popcom magazine*
May, 1987

"Highest award for a simulation game".
"All around best game".
*Login*
July, 1987

"A simulation game without peer".
*Enter*
August, 1986

"Romance of the Three Kingdoms is simulation gaming at its absolute best".
*Technopolis*
July, 1986

"Romance of The Three Kingdoms is a simulation war game that will strengthen any businessman's ability to work through a problem, logically or intuitively".
*P. C. magazine*
October, 1986

"Romance of the Three Kingdoms may be pricey but the entertainment it provides makes it a good buy at any price".
*OH! FM*
March, 1987

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# HOME-OFFICE SHOPTALK

## AN EXPERT'S ADVICE ON STARTING, RUNNING, AND EXPANDING A HOME-BASED BUSINESS

**BY JOANNE H. PRATT**

What job does the future hold for you? By 1995, one out of every four working persons will be providing a service to someone else. Many of these services will be delivered or administered from home: data processing, consulting, advertising, clerical work, public relations, and personnel services are just a few examples. Think of services that people in your community need. Find out what they might be willing to pay. It's a way to identify a business with a future.

**Q. I have contacted our local hospital and health-care facilities to do word processing. However, their data is confidential and cannot be taken from the premises. This certainly throws a kink into my plans to type the medical materials at home. Is this obstacle insurmountable, or is there a solution I am simply overlooking?**

SANDRA WEMMERUS
*Anchorage, Alaska*

**A.** Since the people you spoke with seemed interested in hiring you to do the work in their offices, you at least have a foot in the door. The solution to overcoming the risk of losing records is to reproduce them and take copies home.

That leaves you with the problem of gaining the supervisors' confidence in your professionalism. After all, even if you typed in their offices, you could still be indiscreet about the confidential material.

Try one or more of these tactics to establish your trustworthiness and ability to protect confidential files in your home. Provide prospective clients with business and personal references from people who know you well; submit photos of your office that show the locked files where you will store their materials; and prepare bids that prove the cost–benefit ratio of contracting out the work.

*(Refer to "How to Start a Word-Processing Business," in the November 1987 issue, to see how one medical transcriber started her home-based enterprise.)*

If all else fails, ask to work for a trial period—three months, for instance—in the doctors' offices with the understanding that you will later serve them as a home-based business. And if they are still not convinced, then respect the doctor–patient confidentiality.

**Q. I'm a retired engineer who wants to know whether computer software spreadsheets have ever been used to solve engineering problems. I tried using *Swift Calc* to determine required beam sizes and discovered it works just fine. Has any work been done in this area? If so, is there software available? I have looked in your magazine and searched many software supply houses. No one was aware of such a program.**

MELVIN E. LAYNE
*Reseda, California*

**A.** This type of software application is for a specialized field and is sold in "vertical" markets. Dozens of programs and templates to use with spreadsheets have been written for architects and engineers—your vertical market. But you won't find them reviewed in general interest magazines or sold in retail stores. Instead, leaf through the professional engineering magazines or architectural journals. If your name is on the mailing list for one special-interest package, you'll be flooded with advertisements for mail-order software.

If you find calculations that haven't been covered, you might even be able to market your own spreadsheet templates.

Also look into *Eureka: The Solver* (256K IBM PC, $167; 512K Macintosh, $195), a problem-solving program from Borland ([408] 438-8400) designed for scientists, engineers, financial analysts, other professionals, and students. The program has built-in algebra, trigonometry, and calculus functions and can solve problems expressed in linear or nonlinear equations. *Eureka: The Solver* will evaluate the solution, plot a graph of the function, and generate a written report.

**Q. I will be leaving a $25,000-a-year salary as a legal secretary to stay at home and raise three children. My goal is to launch a full-time career in real estate. However, with my word-processing skills, I also want to continue to make a day-to-day living for my family. I own both an IBM PC*jr*, which I use with a television, and a Tandy Color Computer. I would appreciate your professional advice concerning my options.**

KATHY M. KOPPELMAN
*Laurel, Maryland*

**A.** Before you jump ship, explore the possibility of working for your present law firm from home. You could do routine or overflow legal word processing either as a permanent part-time employee or as an independent word processor. That arrangement would provide you with income while you build your real-estate firm.

Neither one of your computers is ideal for business. You could rig together a system, but I suggest you work full-time an extra month or two to cover the cost of an IBM XT or AT compatible.

You could get by with the PC*jr* for a while if you upgrade it to an XT, using the Racore Drive II Plus for $299 or the Racore Drive II Plus with DMA (Direct Memory Access) for $349 (Racore Computer Products, 170 Knowles Drive, Suite 204, Los Gatos, CA 95030). If you emphasize the word-processing aspects of your business, you will eventually need a monochrome monitor and a laser printer. ■

### SEND US YOUR HOME-OFFICE QUESTIONS

*Send your questions on home business, moonlighting, telecommuting, or any other income-producing work to consultant Joanne H. Pratt, c/o Home-Office ShopTalk,* FAMILY & HOME-OFFICE COMPUTING, *730 Broadway, New York, NY 10003. Due to the volume of mail received, not all questions can be answered. Ms. Pratt regrets that she cannot give personal replies except through her consulting firm, Joanne H. Pratt Associates, P.O. Box 190647, Dallas, TX 75219.*

FAMILY & HOME OFFICE COMPUTING

# Making the Leap from Corporate to Home

BY BARBARA STEIN

## DO YOU HAVE WHAT IT TAKES TO RUN A FULL-TIME BUSINESS?

Anyone who works from home even a few hours each week knows how seductive a home-business lifestyle can be. No 9-to-5, no commute, no boss peering over your shoulder, no wasted time. You roll out of bed, pad down the hall, turn on your computer, and get down to business. *Your* business.

The computer revolution has given birth to a new generation of part-time entrepreneurs and an even larger pack of dreamers who fancy the work-from-home lifestyle. Yet these people choose to hold onto corporate jobs because being a full-time business owner also means being self-employed. And being self-employed means trading security and a steady paycheck for the fear of earning less money.

Moonlighters are probably the best candidates for plunging into their own full-time businesses. Most have already cleared an office space, tested the market, and established a client base. Moreover, according to New Jersey management consultant Gil Gordon, most moonlighters are prepared to face the decision-making issues that come with running a business. Says Gordon, "First you have to ask yourself, 'Am I ready to turn what might be an interesting part-time av-

PHOTOGRAPH BY JOEL WHITE

BARBARA STEIN, *a contributing editor, wrote "Corporate Homeworkers" in the January issue of* FAMILY & HOME-OFFICE COMPUTING.

ILLUSTRATION BY BEATA SZPURA

ocation into my main job? Is it a business or a hobby?' And second, 'Will I continue to find the same satisfaction 40–60 hours a week as I do on a part-time basis?' " If you answer "yes" to both questions, you're ready to examine the strategies that may turn that part-time venture into a full-time career.

A precaution: It is not our intent to encourage or discourage you from making the leap. After all, only you can make that decision. But we'll help show you how to calculate the risks and how to build solid plans. And you'll glimpse the emotional highs and lows encountered by experienced professionals as they recount their first year at home. From there, it's up to you to decide how and when—if at all—you'll make the move.

## SIX REASONS TO STAY HOME

According to the Small Business Administration (SBA), there are numerous compelling reasons to trade in a corporate corner office for a home office.

**1) Control.** You're in charge of arranging your work, leisure, and family time, giving you complete control over your life. You have maximum flexibility in all areas. If you're a night owl, for example, you can work late into the evening and relax during the day. There's no requesting and being denied a vacation. Permission comes from you.

**2) Reduced Expenses.** Money once slotted for the corporate wardrobe, parking and gas, or subway and train fares can be channeled into the business, leisure, or household budget. Many home professionals report significant personal savings.

**3) Free Rent.** Renting office space can quickly eat up profits. And a dedicated home office is a tax deduction. "The biggest consolation for home-based workers is that other entrepreneurs are paying rent, and you're not," says Steve Kahn, author of six business success guides *(see "Are You a Candidate for Entrepreneurship?")*. "That's the sweetest revenge. To me, overhead is the dirtiest word in the English language."

**4) Increased Productivity.** Time gained from fewer interruptions—no co-workers popping into your office, fewer meetings and telephone calls, and no commute—can be put to good use. Even skipping the dress-for-success routine adds hours to the work week.

**5) A New Family Closeness.** Parents are available to attend to children's needs—doctor's appointments, for example—and there is better management of home and family. Children appear to enjoy the arrangement, and parents can work full-time and overtime without feeling guilty.

**6) Happiness.** Home-based workers report a surge in self-confidence, a positive attitude toward work, increased personal growth, and a newfound sense of pride and accomplishment. Most say they would never again work for anyone else.

## SIX REASONS TO STAY CORPORATE

It wouldn't be fair to tell you about the advantages of self-employment without mentioning the most-often-cited drawbacks.

**1) Loss of Income and Security.** At least initially, there may be a significant drop in your income. If you're security-minded and afraid to take risks, self-employment isn't for you.

**2) Lack of Fringe Benefits.** Since you're the boss, you'll have to provide your own retirement, medical, and dental insurances, which are costly.

**3) Family Interference.** Ordinarily, there are no children, spouses, live-in relatives, or pets in high-rise office buildings. At home, however, there are endless distractions. Housework beckons, neighbors, friends, and relatives may phone or stop by to chat during your workday, children may scream for attention, and solicitors may knock on your door. It's up to you to set the limits.

**4) Loneliness.** If you're accustomed to being surrounded by peers, you may feel isolated and out of touch. You're less likely to be invited for drinks after work or to office parties unless you initiate the arrangement. Socializing and chatting at the water cooler are perks of the past.

**5) Space Problems.** As your business grows, it may demand additional space. If you remain at home, it's your responsibility to negotiate for added space and comparison shop for new equipment or supplies. And you are the one who will foot the bill.

**6) Zoning Laws and Complaints from Neighbors.** Neighbors may complain about extra traffic or parking problems on your street. Or you may learn that your residential area is not zoned for a commercial enterprise.

## THE FINANCIAL REQUIREMENTS

Statistics show that more businesses fail because of insufficient funding than for any other reason. For the first time, you'll have to look

at a financial picture that doesn't include a steady paycheck. "Examine this area in primal terms," advises Kahn. "Do you have enough money? You'll need four basic kinds: start-up capital, working capital to maintain your business, expansion capital to grow, and survival money."

Unfortunately, many people overlook the latter, the income that keeps food on the table and a roof over their heads. This is the financial aspect that moonlighters haven't had to consider. "It's crucial that you have a bankroll, a cushion," warns Jerry Christison, an SBA assistant district director for business development.

How much of a bankroll will you need? "That depends on your risk-taking tendencies or conservatism," says Gordon. "One rule is to reserve between 6 and 12 months of your expenses so you can cover your bases if you don't make one dime. You have to decide how optimistic you are about the income stream from the business."

Looking back, many entrepreneurs say they suffered cash flow problems the first year. "I had a long and expensive education," admits Marc Pierce, 27, of Bozeman, Montana, co-owner of Big Sky Carvers, a supplier of finished and unfinished decorative decoys to such mail-order companies as Abercrombie & Fitch, Orvis, and Cabellas. "I had saved $40,000, and it was gone in 18 months. It was pretty bleak for the first two or three years. The cash flow fluctuated a lot. As recently as two years ago, I was working a commissioned sales job to keep a steady income." Happily, Pierce's efforts paid off. Today he works full-time from his home-office shop—"30 steps from my house"—and employs 20 carvers in the shop and 10 painters who work from their own homes.

Of course, it's nearly impossible to nail down exact costs, but estimating helps. A good approach is to call up your spreadsheet program and inventory all aspects of your business and personal needs. Even if you already have a part-time business, you may need money for additional office equipment and supplies, telephone hookups, remodeling, and secretarial services.

And don't forget to give yourself a benefits package—retirement, medical, life, and dental insurance. "That's a real eye-opener for most people," says Gordon. "Another area that people overlook is consulting fees—business, accounting, and legal assistance. Professionals in these areas can provide valuable information. Sit down with your accountant and ask how recent tax laws will affect your business. Ask your attorney about incorporating and check into liability."

An IBM compatible, Pierce says, helped him make the leap. "My business hasn't been the same since," he says. "I wonder how we did it all before. Now we're focused on keeping the business going—and leave the rest to the computer."

## A SOUND BUSINESS PLAN

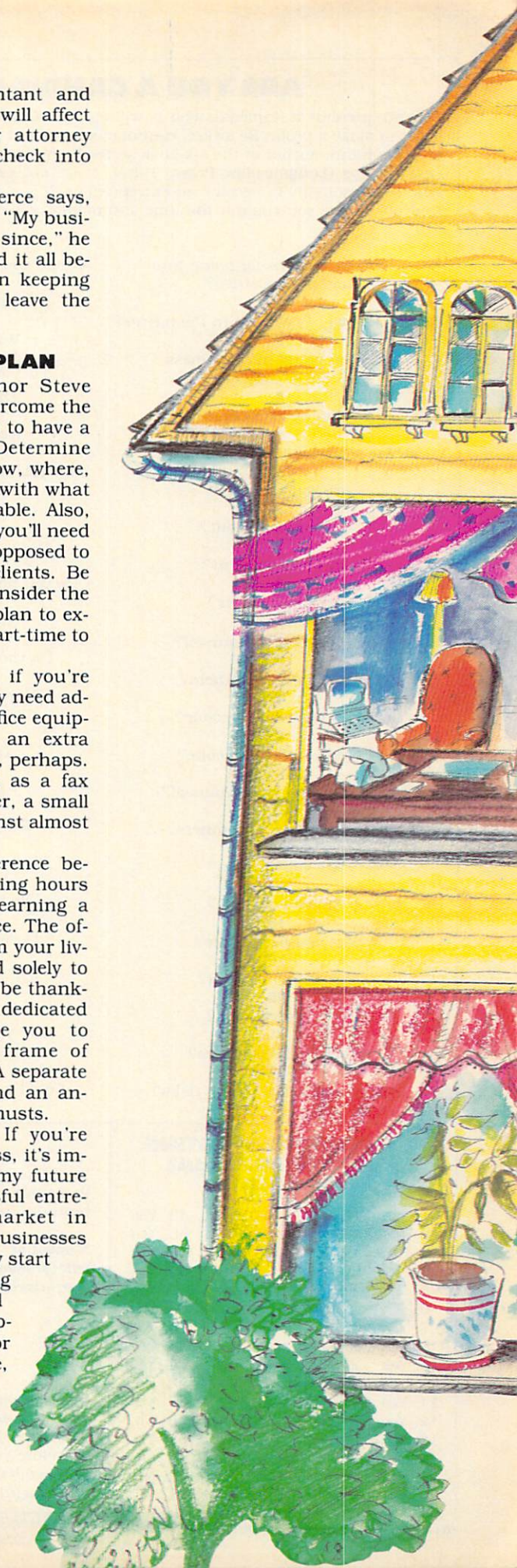
"Ultimately," says author Steve Kahn, "the only way to overcome the fear [of making the leap] is to have a rational business plan. Determine how you expect to grow, how, where, and when you'll work, and with what profit level you're comfortable. Also, determine how much time you'll need to solicit new business as opposed to dealing with established clients. Be as objective as you can." Consider the following elements as you plan to expand your business from part-time to full-time:

**Your Home Office.** Even if you're moonlighting now, you may need additional furnishings and office equipment—a personal copier, an extra printer, and a fax machine, perhaps. By using such equipment as a fax machine and a laser printer, a small business can compete against almost any corporate contender.

Also, there's a big difference between spending a few evening hours in your home office and earning a living full-time in that space. The office should be separate from your living quarters and dedicated solely to business. Not only will you be thankful at tax time, but the dedicated workspace will encourage you to maintain a professional frame of mind during work hours. A separate business telephone line and an answering machine are also musts.

**Define Your Customers.** If you're building a full-time business, it's important to ask, "Who are my future customers?" Many successful entrepreneurs define their market in terms of potential spin-off businesses and future growth. You may start out with a word-processing service, for instance, and add typesetting or desktop-publishing services later. For example, Charline Fontaine, 40, of San Diego, a consultant and corporate headhunter, plans to open her own travel agency.

**Establish Short- and Long-range Goals.** What do you hope to accom-



# ARE YOU A CANDIDATE FOR ENTREPRENEURSHIP?

An entrepreneur is someone who is willing to assume risk in order to make a profit. Be aware, cautions home-based publisher Steve Kahn, author of the six-book series *No Nonsense Success Guides* (Longmeadow Press, 1987), that "not everybody has the personality to become an entrepreneur. If you can find that out before you commit the time and money, you're better off." In his book, *The Self-Employment Test*, Kahn lists 64 questions that people should answer before going into business for themselves. Although there are no right or wrong answers, the responses given below indicate an aptitude for entrepreneurship.

**1.**
Are your reasons for going into business positive?
**2.**
Do you like whom you see in the mirror?
**3.**
Are you going into business out of anger?
**4.**
Are you afraid of failing?
**5.**
Are you afraid of succeeding?
**6.**
Are you stubborn?
**7.**
Are you persistent?
**8.**
Are you confident?
**9.**
Are you a leader?
**10.**
Can you control yourself?
**11.**
Can you control others?
**12.**
Could you hire someone?
**13.**
Could you fire someone?
**14.**
Can you work with yourself?
**15.**
Can you work with others?
**16.**
Are you curious?
**17.**
Are you creative?
**18.**
Are you passionate?
**19.**
Are you emotional?
**20.**
Are you rational?
**21.**
Can you be objective?
**22.**
Are you afraid of taking risks?
**23.**
Would you consider yourself a gambler?
**24.**
Are you an only or oldest child?
**25.**
Was one of your parents an entrepreneur?
**26.**
Did your mother work?
**27.**
Were you lazy as a child?
**28.**
Do you consider yourself "grown up"?
**29.**
Can you set goals?
**30.**
Do you usually achieve your goals?
**31.**
Do you have the ability to concentrate?
**32.**
Are you in good health?
**33.**
Do you have a high energy level?
**34.**
Do you know how to recharge your batteries?
**35.**
Do you trust yourself?
**36.**
Do you trust others?
**37.**
Do lawyers intimidate you?
**38.**
Do accountants intimidate you?
**39.**
Do bankers intimidate you?
**40.**
Does the IRS intimidate you?
**41.**
Are you prepared to give up a regular paycheck?
**42.**
Are you going into the business only for the money?
**43.**
Could you live without money at all?
**44.**
Can you write clearly?
**45.**
Are you afraid of speaking in public?
**46.**
Do you have the ability to listen?
**47.**
Do you enjoy selling?
**48.**
Can you motivate others?
**49.**
Can you bounce back from setbacks?
**50.**
Do you know when to accept a defeat?
**51.**
Do you know your weaknesses?
**52.**
Do you know your strengths?
**53.**
Are you decisive?
**54.**
Are you organized?
**55.**
Do you often daydream?
**56.**
Are you a self-starter?
**57.**
Do you think independence requires dependence?
**58.**
Do you think money can buy freedom?
**59.**
Do you want to be happy and productive?
**60.**
Do you often look for shortcut solutions?
**61.**
Do you have a good business reputation?
**62.**
Is your family behind you?
**63.**
Will self-employment give you insomnia?
**64.**
Do you feel comfortable about going out on your own?

## ANSWERS INDICATING ENTREPRENEURIAL POTENTIAL

| | | | |
|---|---|---|---|
| 1. Yes | 17. Yes | 33. Yes | 49. Yes |
| 2. Yes | 18. Yes | 34. Yes | 50. Yes |
| 3. No | 19. No | 35. Yes | 51. Yes |
| 4. No | 20. Yes | 36. Yes | 52. Yes |
| 5. No | 21. Yes | 37. No | 53. Yes |
| 6. Yes | 22. No | 38. No | 54. Yes |
| 7. Yes | 23. No | 39. No | 55. Yes |
| 8. Yes | 24. Yes | 40. No | 56. Yes |
| 9. Yes | 25. Yes | 41. Yes | 57. Yes |
| 10. Yes | 26. Yes | 42. No | 58. No |
| 11. Yes | 27. No | 43. Yes | 59. Yes |
| 12. Yes | 28. Both | 44. Yes | 60. No |
| 13. Yes | 29. Yes | 45. No | 61. Yes |
| 14. Yes | 30. Yes | 46. Yes | 62. Yes |
| 15. Yes | 31. Yes | 47. Yes | 63. No |
| 16. Yes | 32. Yes | 48. Yes | 64. Yes |

## HOW TO INTERPRET YOUR SCORE

Your score is the total of all those answers that indicate your entrepreneurial potential (number of correct responses):

| Number of Entrepreneurial Characteristics | Your Entrepreneurial Potential |
|---|---|
| 64–55 | GO |
| 54–40 | GO SLOW |
| 39–0 | NO GO |

**GO:** You appear to be ready to make your move as an entrepreneur. Your self-employment instincts are very high and therefore your chances for success as an independent businessperson are equally encouraging. Based on traditional entrepreneurial principles, your chances of success would seem to be above average.

**GO SLOW:** Your self-employment instincts are encouraging. You may seriously contemplate the prospect of going into business for yourself but should do so at a cautious pace. Over time, your score will most likely improve. [Until then, we would advise you to proceed with caution.]

**NO GO:** At this time, you would probably be uncertain as a self-employed person—and therefore, most likely be unsuccessful. Your best bet is to put your entrepreneurial plans on hold until a time when your prospects for success are more encouraging.

*Excerpted from* The Self-Employment Test *(Longmeadow Press, $4.50) from Steve Kahn. The book is available from Waldenbooks and Brentano's.*

**Charline Fontaine is a home-based headhunter and consultant.**

plish in the next several months? What about next year and the following one? How will you reach these goals? Jot down your goals and objectives, and then tack them up in your office. By tracking your progress, you can pat yourself on the back when you're doing well or kick yourself into high gear when necessary.

**Consider Your Family.** "Whether you have roommates or a family, sharing space is negotiable," says management consultant and trainer Louise Bonar, who was selected Massachusetts's Woman Business Advocate by the SBA in 1986. "Talk to the people you live with and tell them what you're doing. It's part of the planning process." It's also a way to gain family support. Although many entrepreneurs opt to work from home in order to better manage home, work, and children, family interference can cause major problems. A crying baby in the background, for example, may damage your professional image and may even cause you to lose a client. Since child care and self-employment are both full-time jobs, you should make arrangements for the care of your children during business hours.

## MARKETING BECOMES CRITICAL

Even if a moonlighting venture has been successful without marketing, you'll need a marketing campaign for your full-time endeavor. First decide on the kind of image you wish to project, and then determine which medium will most effectively reach potential buyers. Finally, decide how much time and money you can devote to the effort.

"A lot of people are really good at what they do, but they don't have the sales and marketing background to support it," says Sales Concepts owner and consultant Sue Fowler, 43, whose Garland, Texas, home business specializes in helping corporations, small businesses, and individuals increase sales, expand customer bases, and reduce their cost per sale by enhancing their telephone and face-to-face sales strategies and selling techniques. "That's what's allowed me to stay in business, and it's critical."

Fowler, whose accounts include such corporate giants as Standard Oil, Frito-Lay, Budget Rent-A-Car, and Texas Instruments, advises anyone who is uncomfortable with marketing to hire someone to do it for them. "A lot of small-business owners who run into hard times should be prepared to apply sales and marketing skills. Marketing is the key."

Consultant Bonar agrees: "The days of the eccentric inventor are over. Become active in your field and be visible. Join roundtable organizations, attend meetings, and network. Take advantage of the time you have in the beginning because you'll have less time later."

Networking is only one way to launch a marketing campaign. Direct mail—brochures, letters, fliers—Yellow Pages, newspaper ads, and television and radio announcements are also effective tools. "One way to gain instant credibility is through advertising," says Christison. "It's especially important in a service business where you need to get the word out quickly."

One approach, particularly suited to moonlighters, is to offer additional services to established clients or propose services to a current employer on a contract basis before leaving the job. Notes consultant Gil Gordon, "There's a growing trend for employers to buy services instead of putting more people on the payroll. If your employer wants to cut expenses, he may agree to have you do X amount of work for so much per hour or week for a specified length of time—say 30 weeks or longer the first year. But," he cautions, "for tax purposes, make sure that you know whether your status is one of an independent contractor or of an employee."

Fowler took this approach before making her move. As a single parent, she wanted to be home and available for her daughter, but she also needed a steady income. "I already had a full-time commitment when another company asked me to work with them on a project basis," she says. "So I took it. When I finally converted to full-time at home, I had a background in selling on straight commission and a lucrative project with which to start. For me, the first few months were not that difficult."

## AFTER THE BREAK

Assuming you're prepared to take the plunge, what can you expect during your first year at home? Experienced home-based entrepreneurs admit that the first year is the tough one because it is an adjustment period. Entrepreneurs use such phrases as "living hand to mouth," "robbing Peter to pay Paul," and "stressed out" to describe how difficult it can be to cope with the enormous responsibilities that self-employed business owners face. Fortunately, as everyone is quick to point out, the lows gradually disappear as they become more comfortable with their new lifestyles.

On the flip side, of course, are the positive draws and excitement that pull entrepreneurs deep into self-employment at home: the tremendous sense of pride and accomplishment that results from creating a full-time business from scratch; a new-found happiness and overall contentment with their lives; personal growth that comes from meeting and exceeding a new challenge; and freedom and control over work and home life. ■

# A Beginner's Guide to Shareware Programs

BY CHARLES H. GAJEWAY

Would you like to save hundreds of dollars on your next software purchase? How about thoroughly examining new software at home before you even buy it? Of course, most people would reply "Yes!" to such offers, but there's only one way to make that answer come true, and it's called "shareware."

## THE HISTORY OF SHAREWARE

In 1982, the late Andrew Fluegelman—founding editor of *PC World* magazine—began distributing a communications program called *PC-Talk* via national telecommunications services, large users groups, and on-line bulletin boards. There was nothing particularly unusual about that; computer programmers and hobbyists had been sharing and swapping programs they had written for years. Those programs were known as "public domain" (PD) software because, unlike the commercial programs sold by computer dealers and software stores, their authors did not claim copyright on their programs, offering them for unrestricted use and distribution.

But *PC-Talk* was the beginning of a third genre of software, which would become known as "user-supported" or "shareware" programs. As with commercial software, the author's interests in the value and use of a shareware program are protected by copyright restrictions. A key difference, however, between shareware and commercial software is that you are permitted to evaluate a shareware package in a real-life situation for a reasonable period of time, rather than purchasing it "blind." If you like it and plan to continue using it, you're expected and obligated to send a "registration fee"—the purchase price—to the author. And if you don't like a program, you're encouraged to pass it on to others who may find a need for it.

Shareware registration fees are quite modest, generally ranging from $5 to $75, depending on the complexity of the program. The fee usually covers the latest update of the program, notification of future revisions, and, if the software is elaborate enough to require it, a printed manual. Some shareware authors have devised further incentives for registration, such as frequently displayed reminders to register that are removed from registered copies, "test-drive" versions with certain key features disabled, or withholding the latest version of the program from general distribution. Such tactics are intended to give you solid, practical reasons to pay for shareware without interfering with the basic shareware philosophy of "try before you buy."

## IS SHAREWARE ANY GOOD?

In the beginning, as *PC-Talk* and the other shareware creations that followed grew more distinct from public-domain programs, shareware tended to be less powerful and less reliable than commercial products. With a continuing economic interest in the performance of their products, however, shareware authors have an incentive to improve their programs.

Since the new concept proved surprisingly popular with a growing audience, shareware authors developed increasingly ambitious programs, polishing the performance, improving speed and reliability, adding features, and generally narrowing the gap between shareware and commercial offerings.

Today's shareware programs—such as the *Galaxy* word processor for MS-DOS or *MaxWrite* for the Macintosh—can be as powerful and useful as commercial programs, despite much lower price tags. Word processors, databases, spreadsheets, telecommunications programs, even dedicated financial systems are available as shareware.

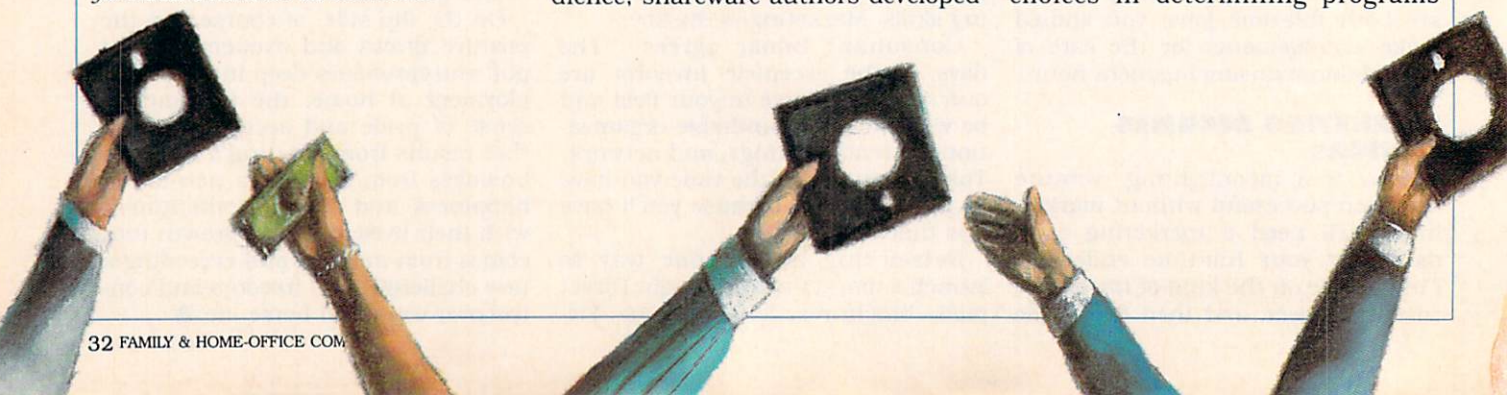
Equally valuable, however, is an amazing variety of special-purpose programs for handling such tedious little tasks as adding or removing carriage returns from downloaded text files, or rescuing a damaged file from a disk, or blanking your monitor screen after it has been idle for a while. These are utilities that you usually cannot buy in a store and that can save your sanity and work when you're in trouble in the middle of the night.

## WHAT WILL SHAREWARE DO FOR ME?

Shareware can offer several benefits. Probably the most important of these is simply making your software budget stretch further. The reasonable prices of shareware mean that you can either purchase a much wider variety of software or simply pocket the savings.

More important, shareware can help you choose exactly the kind of software you need. Because you are free to make in-depth tests and trials at little cost, you can make informed choices in determining programs

CHARLES H. GAJEWAY *is a contributing editor for* FAMILY & HOME-OFFICE COMPUTING.



# INEXPENSIVE, TRY-BEFORE-YOU-BUY ALTERNATIVES TO "REGULAR" SOFTWARE

that best suit your needs. Even if you wind up deciding to use a commercial version of the same type of program, the experience you gained testing shareware will help you select precisely the package you need.

For more experienced users, shareware's availability on telecommunications networks during evenings and weekends—as well as during the day—is a form of insurance. Need to convert a graphics file from one format to another? Have an accidentally erased disk or a trashed file? Do you have to create a chart unexpectedly? Presuming that you have some degree of technical familiarity, all these problems can be handled by shareware downloaded on an as-needed basis. Otherwise, you can download a few of these utilities in advance, to practice with them and learn more about your system.

## WHAT'S THE DOWNSIDE OF SHAREWARE?

But there are trade-offs. Few shareware authors can offer the kind of user support offered by WordPerfect Corporation or Lotus Development Corporation; using shareware to handle complex tasks may leave you on somewhat shaky ground—especially if you've downloaded a poorly created program that crashes your system. Part of the reason for the shaky ground is that, with most shareware, documentation (if any) comes only on disk. Keep in mind that shareware program development and refinement varies widely, from exceptional to almost nonexistent; although the authors of more sophisticated programs, such as *PC-Write*, are normally quite attentive to keeping their creations up to date. Also, shareware still tends to be less refined and bug-free than equivalent commercial programs; however, most of it is much improved over earlier efforts.

Many people find these risks acceptable, particularly those who have experience with personal computers. After all, owners of some commercial software have also encountered bugs and less-than-stellar support. The convenience and low cost of shareware can often outweigh occasional flaws and support shortcomings for value-conscious users who are willing to work around them.

## WHERE CAN I GET SHAREWARE?

Telecommunications is the prime means of distributing both shareware and public-domain software because it offers authors a quick and inexpensive way to make their work available to many users. Dialing into a national on-line network or local BBS and downloading a program is simple, convenient, and relatively inexpensive—if you have a modem and communications software and if you have mastered the mechanics of downloading the service's library files (to minimize on-line time, most library files are stored in a compressed format that must be converted before use; the download procedures recommended by the network or BBS are usually described in a help file for new users). The section that follows lists a selection of shareware, including the name and number each program is found under for CompuServe and GEnie.

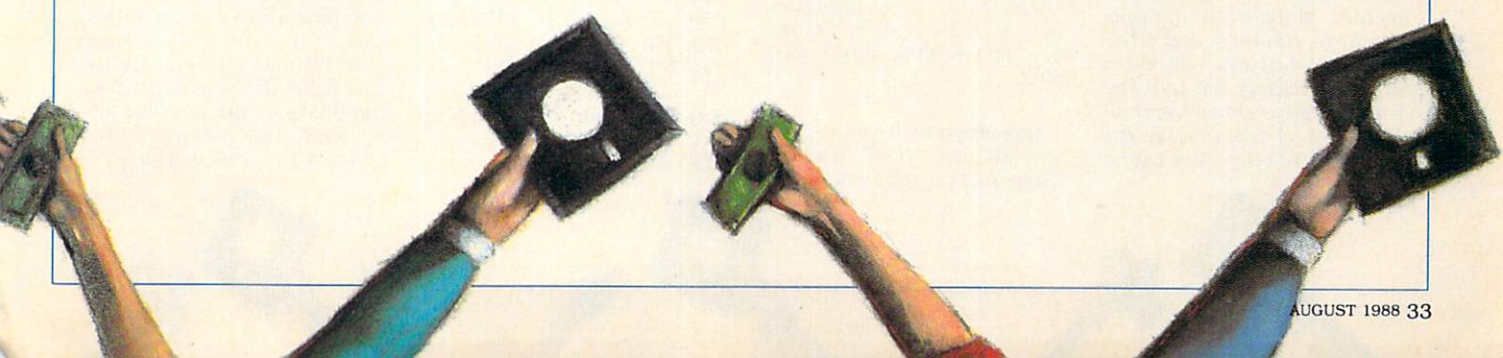
For those who do not wish to become involved with the technicalities and expense of telecommunications, shareware assortments are available on disk from local and national user groups, dealers, and businesses known as software exchanges. These alternative sources usually charge a modest duplication fee (less modest but still inexpensive for the software exchanges) that may be even more economical—if considerably slower and less convenient—than downloading. It's important to remember that downloading a program or paying for a disk containing shareware is not the same as paying for the program itself. If you like a program and intend to use it, you still must pay the registration fee.

## STARTING OFF WITH SHAREWARE

Shareware is an excellent way to expand the productivity of your computer, even if you choose to use commercial software for your primary applications. It's also an excellent way to become more knowledgeable and proficient with the technical aspects of your computer and to custom-tailor your system to your own needs and habits. Shareware is a valuable resource for your personal computer.

The programs that I have mentioned here are merely a sampling of a few of the most popular programs in the CompuServe and GEnie software libraries. There are hordes more to choose from, but I think that these are enough to give you an idea of what's available and to get you started with some of the best and most important programs. If you enjoy them and find them useful, please take the time to send in the registration fee, so that the author will be motivated to keep up the good work.

ILLUSTRATION BY STEVE DININNO



# SELECTED SHAREWARE APPLICATIONS

The world of user-supported shareware is large and continually growing. As an introduction, take a look at these selections of MS-DOS and Macintosh shareware available through most on-line services, bulletin boards, users groups (both local and national), and shareware exchanges. Titles found on two of the major services—CompuServe (CIS) and GEnie—are listed by name, number (GEnie only), data library (LIB, CIS only), and forum (CIS) or roundtable (GEnie)—plus each shareware publisher's address for direct contact. A guide to some national users groups and shareware exchanges follows the software. Please note that as shareware is sold by individuals and small businesses, prices and addresses are more subject to change than they are with larger companies.

For CompuServe (CIS) users: All MS-DOS titles can be found in the IBM Software Forum (IBMSW), except for *ProComm*, which is archived in the IBM Communications Forum (IBMCOM). All Macintosh titles can be found in the Macintosh Professional Forum (MACPRO).

For GEnie users: After going to the appropriate roundtable's software library—IBM PC or Macintosh—download the program by the given number (easier method) or title.

## MS-DOS SHAREWARE

**Word Processing.** Some word processors that have proven very popular are *PC-Write*, *Galaxy*, and *New York Word (NY Word)*. These programs differ mainly in operating style: *PC-Write* presents a basically blank screen, and you use a variety of Control and Alt–key commands. *Galaxy* features pull-down menus, plus an emulation of *WordStar*'s command set. *NY Word* also has pull-down menus, along with multiple windows, columns, and other advanced features. All three word processors fall into the intermediate category and offer plenty of features for the majority of home-office users.

**PC Write** ($89)
CIS: PCW1.ARC, PCW2.ARC (LIB 2)
GEnie: PC-WRT1.ARC (3163), PC-WRT2.ARC (3164)
Quicksoft, 219 First Ave. North, #224, Seattle, WA 98109; (206) 282-0452

**Galaxy** ($50)
CIS: GALAXY.ARC (LIB 2)
GEnie: GALAXY23.ARC (8287)
Omniverse, P.O. Box 2974, Renton, WA 98056; (206) 228-7627

**New York Word** ($45)
CIS: NYWHLP.ARC, NYWMAP.ARC, NYWPRT.ARC, NYWSPL.ARC, NYWORD.ARC (LIB 2)
GEnie: NYWRD22A.ARC (5087), NYWRD22B.ARC (5088), NYWUPD.ARC (5089)
Magma Software Systems, 15 Bodwell Terrace, Milburn, NJ 07041

**Communications.** As stated in the main article, *PC-Talk* was the original shareware program. Noted for its smooth operation and ease of use, *PC-Talk* is still around and being updated, but has been surpassed in both power and popularity by *ProComm* from Datastorm Technologies. The latest, now commercial, version is *ProComm Plus*, available in a "test-drive" version on the telecommunications networks; yet the last shareware version of *ProComm* (2.4.2) is still available. I use *ProComm* regularly and recommend it highly.

**ProComm** ($50)
CIS: PRC242.ARC, PRCDOC.ARC (IBMCOM, LIB 3)
GEnie: PRCM242.ARC (2298), PRCMDOCP.ARC (2011)

**ProComm Plus** ($75; "test-drive" version free)
CIS: PCPLUS.ARC (IBMCOM, LIB 3)
GEnie: PCPLUSTD.ARC (8510)
Datastorm Technologies, Inc., P.O. Box 1471, Columbia, MO 65205; (800) 626-2723

**Spreadsheets.** If you need a spreadsheet, you'll find *As Easy As* is a good one. While it offers smaller dimensions than Lotus *1-2-3*, *As Easy* uses a similar operating style and contains ample functions and features. The only serious problem is that there is very little documentation with the program, making it difficult for beginners to get started. If you want, though, you could get an introductory book on spreadsheets to help you begin.

**As Easy As** ($30)
CIS: ASEASY.ARC (LIB 6)
GEnie: ASEASY30.ARC (5762)
TRIUS, Inc., 15 Atkinson St., Lynn, MA 01905

**Databases.** The best-known shareware database is probably *PC-File* from ButtonWare, a popular file-management program that has been around for several years. You might also want to look at *PC-DBMS*, a multifile relational database.

**PC File Plus 2.0** ($70, plus $5 shipping)
CIS: PCF1.ARC, PCF2.ARC (LIB 5)
GEnie: PCFILED.ARC (8761), PCFILEP.ARC (8762), PCFILEU.ARC (8763)
Buttonware, P.O. Box 5786, Bellevue, WA 98006; (800) 528-8866

**PC-DBMS** ($20)
CIS: PCDBMS.ARC (LIB 5)
KWare, P.O. Box 16206, Arlington, VA 22215

**Graphics.** Interested in graphics? Look at *PC Draft I*, a drawing program for CGA-equipped machines. If you like it and register, you will receive *PC Draft II*, an even more powerful graphics program. If doing business graphs and charts is more in line with your needs, *ExpressGraph* might be just the ticket.

**PC Draft I** ($50)
CIS: PC-DRA.ARC (LIB 10)
GEnie: PC-DRAFT20.ARC (2424)
Natural Software, 19 South 5th St., St. Charles, IL 60174; (312) 377-7320

**ExpressGraph** ($49, plus $3.50 shipping)
CIS: EG.ARC (LIB 10)
GEnie: EXPGRAPH.ARC (8666)
Expressware Corp., P.O. Box 230, Redmond, WA 98073; (206) 788-0932

**Finances.** There are also programs to support many special needs. And though I did not have the opportunity to investigate them in depth, there are several small-business accounting systems available as shareware. A number of personal-finance shareware programs can be found on-line, too; *FastBucks* is one of the most recent and popular. If you bill your services based on time, you may want to look at *Time Is Money*, a tracking/billing system designed to help ease that tedious task. A very popular program is *PC TAX*; even though you might well be skeptical of a shareware-tax program, given the increasing complexity of tax preparation, this program has been refined for several years now. If you're interested, you might want to examine last year's version.

**FastBucks** ($40)
GEnie: FASTBUKS.ARC (7009)
Software Expressions, P.O. Box 301002, Houston, TX 77230

**Time Is Money** ($95)
CIS: TIME10.ARC (LIB 5)
Custom Data Solutions, 820 Driver Ave., Winter Park, FL 32789

**PC TAX 87** ($25)
CIS: PCT87A.ARC, PCT87B.ARC, PCT87C.ARC, PCT87D.ARC (LIB 5)
GEnie: PC-TAX87U.ARC (7943)
James T. Demberger, 9862 Lake Seminole Drive West, Seminole, FL 34643; (813) 397-2930

**Utilities.** This might be the single largest shareware category; there's a seemingly endless variety already available, with more coming daily. Two that appealed to me included *Directory Extended*, a disk and file-management utility that eases the pain of managing 20MB or more of files on a hard-disk drive, and *DSKLABEL*, a neat little pro-

gram that scans the contents of a floppy disk, then prints it out on a label.

**DX: Directory Extended** ($25)
CIS: DX160.ARC, DXDOC.ARC (LIB 1)
Econo-Soft, P.O. Box 40445, San Antonio, TX 78229

**DSKLABEL** ($15)
CIS: DSKMKR.ARC (LIB 3)
Eric Hwang & Associates, 2285 Pine Knott Drive, Dayton, OH 45431

## MACINTOSH SHAREWARE

**Word Processing.** The only full-fledged shareware word processor that I am aware of is *MaxWrite*, which can take advantage of color on the Mac II. There are, however, desk accessory (DA) mini-editors that are very handy because they can be used from inside almost any program. *MockWrite* is the original DA editor and is extremely simple and straightforward to use; it comes as part of *MockPackage+*, a series of four DAs including one for on-line communications and one for simple business graphs. The newer *miniWRITER* lets you choose various fonts and point sizes, prints extremely well on an ImageWriter or LaserWriter, and gives you options that make it easier to handle downloaded text.

There are also desk accessories designed to supplement *MacWrite* and other word processors. Among my favorites is *MW Word Counter*, a DA that tallies words, characters, sentences, and paragraphs in a document, as well as average words per sentence—for only $5.

**MaxWrite** ($30; demo only on-line)
GEnie: MAXWRITE 0.995.SIT (8289)
MindVision Software, 1721 Benton St., Lincoln, NE 68521

**MockPackage+** (*MockWrite, Mock Terminal, Mock Print, Mock Chart*) ($35)
CIS: MCKPLS.BIN (LIB 5)
GEnie: MOCKPACKAGE-+4.3.4.PIT (3102)
CE Software,1854 Fuller Rd., West Des Moines, IA 50265

**miniWRITER** ($12)
CIS: MINWRT.BIN (LIB 5)
GEnie: MINIWRITER 1.42.PIT (8946)
Maitreya Design, P.O. Box 1480, Goleta, CA 93116

**MW Word Counter** ($3)
CIS: MWWC.V2 (LIB 5)
GEnie: MULTI WORD COUNTER DA (5443)
Andrew E. Page, 3 Bushnell Drive, Lexington, MA 02173

**Communications.** Probably the most popular of all Mac shareware programs has been *Red Ryder* from FreeSoft, a tour-de-force of telecommunications programming. Although *Red Ryder* became a commercial program with version 10.3, sold by dealers and software stores, version 9.4 remains on the telecommunications networks as shareware. Either version represents an excellent value as one of the best communications programs available.

**Red Ryder 9.4**
CIS: RR94.BIN (LIB 8)
GEnie: RED RYDER 9.4.PIT (1921)
The FreeSoft Company, 150 Hickory Drive, Beaver Falls, PA 15010

**Spreadsheets.** If you need a spreadsheet, check out *BiPlane*, which can operate as either a DA or as a standalone application. While it is smaller than *Excel* or *MacCalc*, it is more than adequate for many home-office purposes. The documentation is a bit on the skimpy side, a negative for those without much spreadsheet experience, but a good basic book on spreadsheets can bring you up to speed.

**BiPlane** ($40)
CIS: BIPLNE.BIN (LIB 5)
GEnie: BIPLANE 1.01.PIT (8983)
Alan G. Porter, P.O. Box 1783, Huntington Beach, CA 92647

**Graphics.** A provocative graphics package for the Mac is *DAfx*. As its name implies, *DAfx* is a desk accessory aimed at creating visual effects. It's basically a paint program with several special functions. As an incentive for registration, the evaluation version includes just enough features to let you get a very basic feel for the program. One good graphics utility desk accessory is *Artisto+*. Not only can you view any *MacPaint*-type graphic with *Artisto+*, this DA also lets you clip all or a portion of a graphic and either transfer it into a current graphic or document—say for desktop publishing—or store the graphic in the *Scrapbook* for later use.

**DAfx** ($10–$20)
CIS: DAFX12.SIT (LIB 5)
GEnie: DAFX.SIT 1.20! (8365), DAFX.DOCS.MW.SIT (7956), DAFX DOCUMENT ICONS (8046)
Mi Concepts, P.O. Box 8822, Kentwood, MI 49508

**Artisto+** ($5–$10)
CIS: ARTIST (LIB 5)
GEnie: Artisto+ 2.01PIT (5925)
Tom Taylor, 3405 Walton Way, San Jose, CA 95117

**Utilities.** Naturally, there are plenty of programs designed to make using your Mac easier and more enjoyable. I especially like *DiskInfo*, a DA that lets you find, rename, and delete files while in an application; *Windows*, a DA that helps manage multiple windows on-screen; *Big Screen*, a system accessory (Init) that sets aside a part of RAM to simulate a much larger monitor screen to speed up scrolling; *SCSI Parker*, a *Control Panel* accessory that automatically parks your hard-disk drive head on shutdowns, saving you from potential data loss; and *AutoBlack*, a little program that puts an accurate clock on-screen if your computer has been idle for five minutes (more or less, depending on the time you set it for).

**DiskInfo** ($10)
CIS: DSKINF.BIN, DSKINF.DOC (LIB 5)
GEnie: DISKINFO 1.45 DA.PIT (4129)
Maitreya Design, P.O. Box 1480, Goleta, CA 93116

**Windows** ($5)
CIS: WNDW11.BIN (LIB 5)
GEnie: Windows v2.0 (6273)
Marsh Gosnell, 35 Godfrey Road, Montclair, NJ 07043

**Big Screen** ($5)
CIS: BIGSCN.INI (LIB 5)
GEnie: BIG SCREEN.PIT (4403)
Kurt J. Hebel, 252 ERL, 103 S. Mathews, Urbana, IL 61807

**SCSI Parker** ($5)
GEnie: SCSI PARKER CDEV 1.2 (9546)
Bruce Tomlin, 15801 Chase Hill Blvd., #109, San Antonio, TX 78250

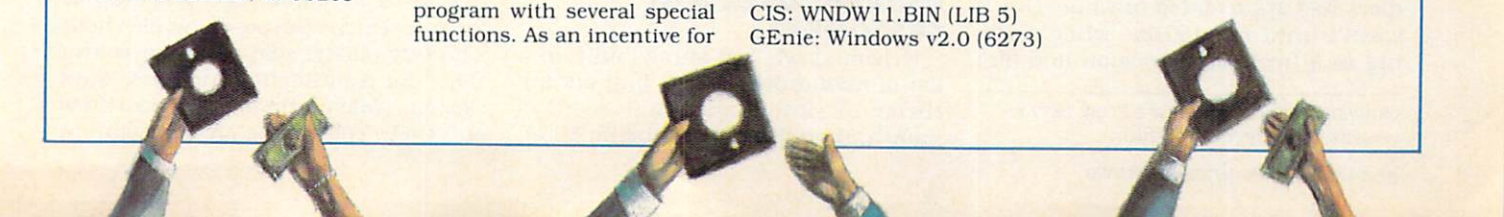
**AutoBlack** ($5)
CIS: AUTOBL.PIT (LIB 5)
GEnie: AUTOBLACK1.5.PIT (4930)
Itty Bitty Computers, P.O. Box 6539, San Jose, CA 95150

## ALTERNATE SOURCES FOR SHAREWARE

If for some reason you would prefer not to download shareware software, there are alternative sources for these and other programs.

One good and inexpensive source is a national special interest group (SIG), which is basically a large user group. These SIGs maintain a regular list of disks filled with shareware and public-domain software, which you can order for a nominal fee. One such SIG for the Macintosh is the Berkeley Macintosh User Group or BMUG. It is located at 1442A Walnut St., #62, Berkeley, CA 94709, (415) 849-9114. BMUG charges $3 per disk, regardless of contents. For MS-DOS computers, the biggest is PC-SIG, at 1030 E. Duane Ave., Suite D, Sunnyvale, CA 94086, (408) 730-9291. PC-SIG asks $6 for 5.25-inch disks and $7 for 3.5-inch disks.

Whether you choose to purchase disks from a SIG or a software exchange or download them in your home office, please remember that you've paid only for the price of the disk or your on-line time. The cost of any shareware that you use regularly is the actual fee, payable directly to the publisher. ■



# Soldiers March Through the Mail

## A ZEALOUS COLLECTOR OF TOY SOLDIERS TAKES ORDERS FOR A LIVING. HERE'S HOW HE TURNED HIS HOBBY INTO A $100,000 MAIL-ORDER BUSINESS.

**BY BERNADETTE GREY**

During the early 1950s, a preschool boy was unwittingly laying the foundation for a future business. At a time when Americans were entangled in Korea, enlisting at age 18, and engrossed with World War II movies, James Delson got his small hands on his first toy soldiers, the Transformers of the fifties.

While comic books and baseball cards captivated other youngsters, plastic and lead soldiers enamored this tenacious and imaginative young boy. "By the time I was 6 or 7, I was obsessed," remembers Delson, now 40. "It was the mid-50s, the heyday of the plastic soldier. I went from wanting 60 soldiers to wanting thousands of soldiers."

Delson spent many a weekend pitting his soldiers against others' soldiers. During their adolescent years in New York City, Delson and a couple of neighborhood cronies often gathered to play weekend-long war games with 1,200 soldiers and such devices as darts and ping-pong balls.

Delson's interest in toy soldiers waned in high school. But during his senior year in 1966, he learned of the demise of a British company that manufactured his favorite lead soldiers. Delson withdrew $500 from his savings account and snatched up 1,500 of the company's soldiers, enough for an adequate army. By the end of high school, Delson had 6,000 soldiers and a renewed yearning for even more of these miniature heroes.

### BUILDING UP A MIGHTY INVENTORY

Over the years, Delson's toy soldiers had appreciated in value. But it wasn't until the 1970s—while working as a freelance television and film critic for such publications as *Omni*, *Psychology Today*, *Penthouse*, and *Film Comment*—that he decided to cash in; he sold his lead soldiers for more than a 1,000-percent profit. "I turned $500 into $8,000 and was feeling very smug," says Delson. "I took that $8,000 and bought 15,000 shiny, new plastic soldiers."

His inventory continued to grow, right in his apartment on Manhattan's Upper West Side. In 1980, Delson had 30,000 soldiers; he had 60,000 by 1984. That year he decided to turn his hobby into a small business, making money selling soldiers. (A number of his solders were becoming collector's items.) With an IBM PC, he typed up a 56-page catalog of his collection and, in the classified sections of a few hobbyist magazines, offered his catalog for $20.

### MARCHING INTO BUSINESS

Delson was soon ready to take the next step. He embarked on a plan to buy, very broadly, all types of soldiers. Toy soldiers are like wine; they appreciate with age. And when companies go out of business or discontinue lines, product prices often skyrocket.

"By 1985, I had a little business going," says Delson, who named his business The Toy Soldier Company. "I made $4,500 that year. That's when I saw that there was something going on. I asked some friends to invest in my company and started buying vast amounts of soldiers wholesale." His inventory grew, and his toy soldiers increased in value, some slowly, some at a rapid rate.

### WINNING OVER NEW CUSTOMERS

Delson slowly but surely built up a list of mail-order clients, first adding three or four new customers a month, then five or six. During 1986, he sold $20,000 worth of toy soldiers. And he knew that, with a sharp business approach, he could be far more successful. He hired an artist to create three different print ads and to design a logo for his stationery, envelopes, mailing stickers, and business cards. He bought a laser printer to improve the look of his catalog and, at the end of 1987, took out his first full-page advertisements in three specialty magazines. These ads attracted 60 new customers, and The Toy Soldier Company closed the year with sales of $35,000.

Now Delson advertises regularly in several specialty magazines. Business is booming, and Delson has big plans for expansion. Since December 1987, sales have been averaging about $10,000 a month, and Delson expects to gross more than $100,000 this year. In April alone, the company picked up 155 new customers, equal to its grand total for all of 1987.

The company's mail-order list currently includes 800 addresses in all 50 states and in 12 countries. According to Delson, there are 200,000 people across the country who collect toy soldiers. His goal is to attract 5,000 of these buyers and to boost his sales to $500,000 within the next few years.

### FINDING A TARGET

Who, you may be wondering, buys toy soldiers? Although it's no shock that the majority of Delson's customers are male, it may surprise you that most of his buyers are adults. (Did you know that Malcolm Forbes collects toy soldiers? As did H.G. Welles and Winston Churchill.) People who buy his lead soldiers generally do so for investment purposes, while those who buy plastic soldiers often collect them for sentimental reasons, says Delson. "Maybe their mothers threw out their collections. A lot want to

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BERNADETTE GREY *is* FAMILY & HOME-OFFICE COMPUTING*'s executive editor.*

recapture their lost youth. They're in it for the fun, to relive their youth—not just for the investment."

## CONQUERING RIVALS

To win over new customers, Delson focuses on providing good service and on keeping a large and wide-ranging inventory. He currently owns nearly 500,000 soldiers. ("As far as I know, I have the largest inventory of toy soldiers in the world," he says.) Delson knows of 11 other companies nationwide that sell soldiers by mail and intends to take over much of his competitors' business. His basic strategy is quite simple. "I try to serve other people the way I wish others would serve me," says Delson. "I get calls all the time from customers asking me why people are so surly in this business."

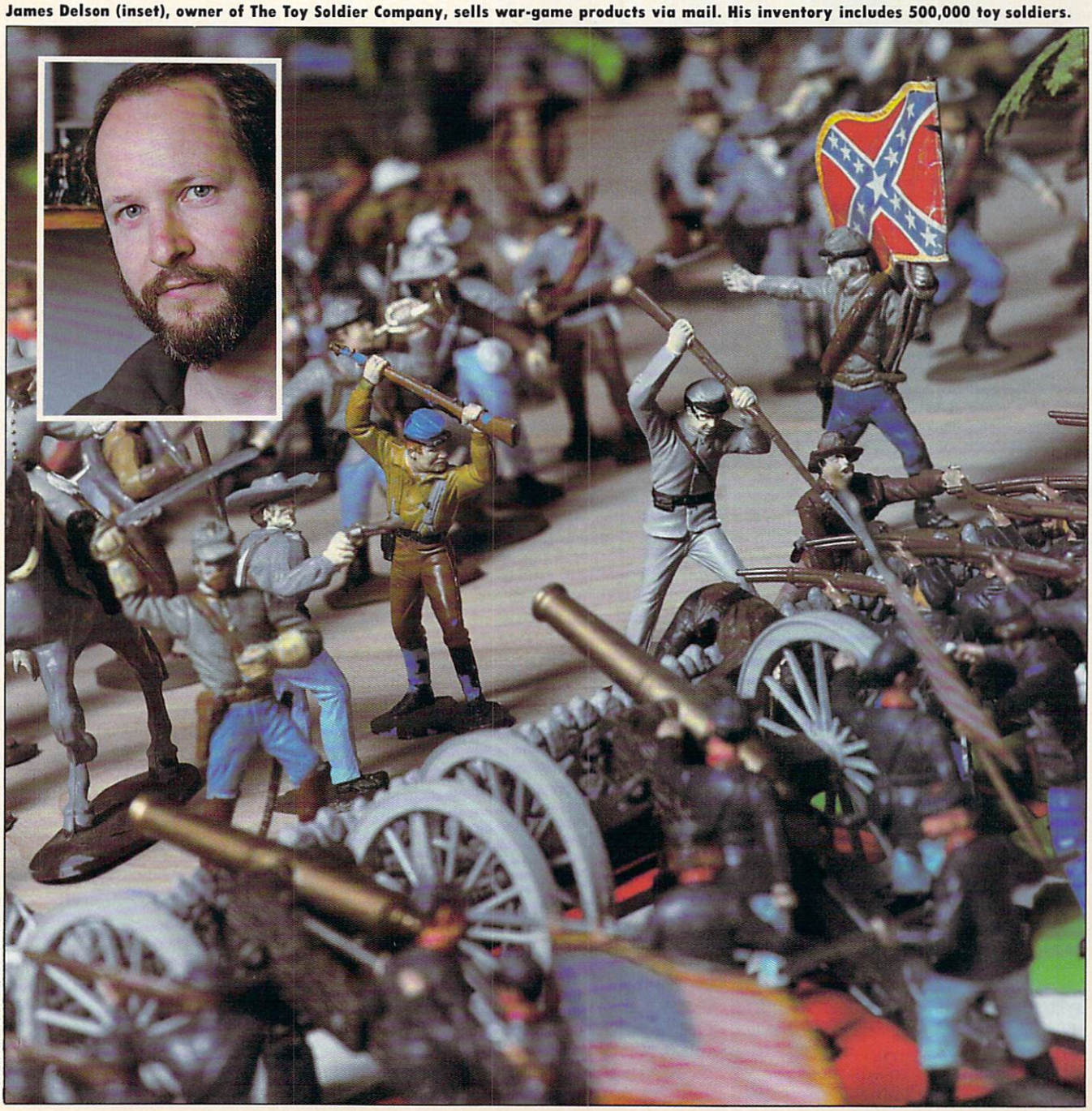
## THE BEST AMMUNITION: GOOD SERVICE

Delson schemes up his business tactics with the same precision he uses to play war games. He spends time talking to customers and offers free layaway plans and discounts for large orders. Also, while other toy-soldier distributors mail out merchandise in liquor cartons stuffed with newspaper, Delson uses specially purchased boxes, packing foam, and shipping labels. And soldiers are always mailed within two weeks of receipt of the order.

The company also continually expands its product offerings. The catalogs sell a range of war-game products, including various toy soldiers and related items, miniature buildings and vehicles, and paint and molds. "What I've done is created a game plan of how I want to expand," explains Delson. "I'm the only one who does all that I'm doing."

Probably the best offerings Delson provides to customers are his professional-looking catalogs, which cost $7.50. Updated yearly, they are carefully planned, prepared, and proofread and will soon contain pic-

**James Delson (inset), owner of The Toy Soldier Company, sells war-game products via mail. His inventory includes 500,000 toy soldiers.**



PHOTOGRAPHS BY TONY LOEW

## WHAT TO SELL BY MAIL*

Are you thinking of selling something through the mail? A product you've created or one manufactured by others? Are you thinking of selling original products or copies of already-existing products? Are you going to be selling a year-round product, which knows no season, or a one-time fad, which has the potential of invading the marketplace and disappearing just as quickly?

Finding the right product or service to sell by mail can be as easy as waking up in the middle of the night with a great idea—or as difficult as searching the flea markets of the world for a product that doesn't exist.

**1) Should you sell a product you've created or one manufactured by others?**

Typically, it will be easier and more efficient to sell products made by others. The most obvious exception is self-publishing, and other exceptions might include certain items that need your personal touch or the touch of craftspeople.

**2) Should you sell original products—or copies of existing products?**

Original products have a great advantage, but the cost of producing them may be onerous. If manufacture can be accomplished with relative ease and minimum expense—and your promotion of the product is strong—then an original product holds considerable promise. Existing products have familiarity on their side. There is, however, a risk that a "me-too" product will be regarded as a latecomer to the marketplace and, therefore, be perceived as second-best. The even greater risk in copying an apparently successful product is that (a) it may not be as successful as it appears or (b) the owner of that product has hidden manufacturing or marketing advantages of which you are unaware. Copying is a risky business at best and may be a legal infringement on another's property rights, at worst.

**3) Are you going to be selling a year-round product with repeat business prospects or a one-time, one-shot fad?**

Fads—which typically require intensive, expensive promotion—are more suited for large companies with deep pockets. Repeat business is the strength (and objective) of almost every mail-order business. If you can develop and build a steady, all-season product, you will have a head start toward long-term success.

—STEVE KAHN

## THE THREE KEYS TO MAIL-ORDER PRODUCT SELECTION*

Remember the 21st letter of the alphabet: U.

**1) Unique:** The more special the product, the better its prospects for success.

**2) Useful:** The more real (preferably demonstrable) benefits a product offers the consumer, the greater its chances for success.

**3) Unavailable:** If your product can't be found in a neighborhood store or at the mall, you have an obvious advantage: The customer *has* to come to you!

These three U's are an easy-to-remember, easy-to-apply checklist. If a product checks out in all three aspects, it certainly is worth looking at more carefully—and perhaps even testing in the marketplace.

—STEVE KAHN

## DECIDING WHERE TO SELL*

The mail-order business consists of three categories: (1) Direct mail; (2) Catalogs; and (3) Newspaper and magazine advertising. How does the owner of a new mail-order business know where to advertise his or her product?

**Direct Mail.** If the product lends itself to strong, lengthy, descriptive copy that can be enhanced by useful, supportive graphics, then direct mail is the medium to employ to introduce the product. Direct mail is an expansive, expressive (but expensive) medium that gives you a great deal of latitude to present your product. The direct-mail package can contain many elements and, thus, allows you to use assorted attention-catching techniques.

**Catalogs.** Catalogs are not the typical choice of introductory medium for a start-up mail-order business. However, if, for example, your mail-order business is an expansion of a successful retail store (and, therefore, you have a large inventory of products in stock), then a catalog might be a perfectly sensible selection for you. Catalogs are frequently an evolutionary medium for a mail-order business, symbolic of its growth and strength over a period of time.

**Newspaper and Magazine Advertising.** If the product can be described effectively in relatively few words—and there are newspapers or magazines directed to its target audience—then print is your most logical introductory medium. It is usually fairly priced, feasible for scheduling on relatively short notice, and a fast indicator of success—or failure.

—STEVE KAHN

* *The above articles are excerpts from* Getting Into the Mail-Order Business *($3.95) by Steve Kahn, published by Longmeadow Press.*

tures. (The company's new scanner makes this feasible.)

Delson's investment in powerful hardware and software has made much of this professionalism possible. The Toy Soldier Company uses an Epson Equity III+ computer and a Hewlett-Packard laser printer and scanner, as well as such software as *Ventura Publisher*, *dBase III*, and *Framework*. The success of Delson's business also depends on a two-line telephone and an answering machine.

### ASSESSING THE WORK-FROM-HOME REGIMENT

All of this hardware and much of the company's inventory are kept right in Delson's crowded yet orderly apartment, which he shares with his wife, Jenny. Delson, who has always worked from his apartment, has part-timers come to his home, and Jenny, a full-time editorial assistant, works part-time for Delson keeping track of customer records.

His apartment brims over with so many boxes of soldiers that it's hard to believe most of the company's inventory is stored in a large, rented loft space in nearby Brooklyn. While Delson plans to continue working from home, he will soon move his entire inventory and shipping operations to Brooklyn.

Delson uses that loft space for another activity: He still gets together with friends to play war games. Played with complex mathematical tables and 20-sided dice, their wars last for many months, instead of one weekend. It takes two days just to set up their movie-like war sets with such props as towns, jungles, trains, roads, ships, mountains, and, of course, soldiers. Lots of soldiers. Up to 20,000 of them. Finally, at the age of 40, James Delson has enough toy soldiers. ■

## FOR MORE INFORMATION

Are you interested in starting or expanding a mail-order business? These books and organizations may be able to help.

***Direct Mail List Rates & Data.*** This book profiles 80,000 mailing-list selections. Tells you where to go to buy mailing lists that are right for your business. Published six times a year. ($100 for a single copy; $250 for a yearly subscription). Standard Rates & Data, 3004 Glenview Road, Wilmette, IL 60091; (312) 256-6067.

**Direct Marketing Association.** A mail-order business trade association. For more information and a membership kit, write or call: 6 East 43rd Street, New York, NY 10017; (212) 689-4977.

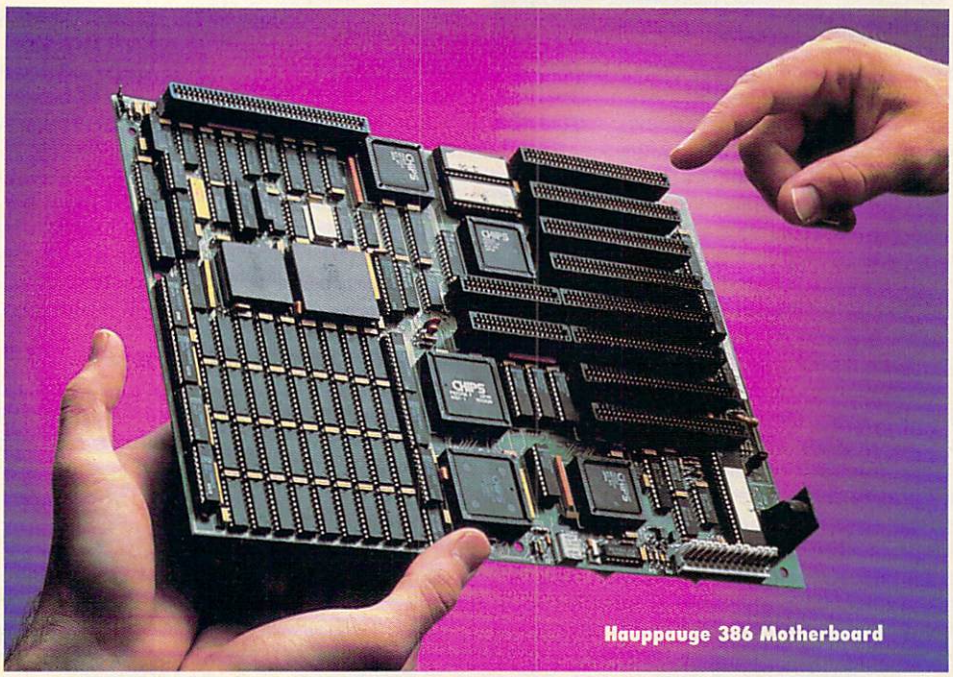
***Getting Into the Mail Order Business***, by Steve Kahn. This 96-page step-by-step guide to starting a mail-order business is published by Longmeadow Press, P.O. Box 10218, 201 High Ridge Rd., Stamford, CT 06904; (203) 356-7652; ($3.95).

# BUYER'S GUIDE

# THE QUEST FOR SPEED

BY STEVE DITLEA

## IS YOUR COMPUTER SLUGGISH? CAN YOU GO TO LUNCH WHILE YOUR SPREADSHEET RECALCULATES? ARE YOU TIRED OF WAITING FOR YOUR DATABASE TO SORT? WHAT CAN YOU DO?



Hauppauge 386 Motherboard

No matter how tight your budget or what system you use—Apple II, Macintosh, or IBM compatible—you can afford faster computing. Simply by adding more cost-effective hardware and upwardly compatible software to your present system, the watch icon or the words "Please Wait" flashing monotonously on your screen can become images of the past.

Today's speed-up options cost as much as $12,499 for a new, high-speed computer (Compaq 386/20 Model 300) to as little as $129 for add-on hardware to accelerate the speed of your current system. For your investment, your favorite productivity software can run two, three, or four times faster, ending the frustration of prolonged wait times and increasing your personal efficiency.

### LEADERS OF THE PACK

Setting the pace in the fast lane are the latest high-speed personal computers—the Ferraris of the desktop—with prices to match. The Macintosh II and the latest IBM compatibles rival the speed of office-size minicomputers—running up to 20 times faster than once-standard personal computers.

After putting one of these speed demons through its paces, returning to a formerly spritely PC clone is like getting behind the wheel of a Yugo after taking a spin around the race track at LeMans in a Ferrari. The speed champs of personal computers owe their performance to new, faster microprocessors that are compatible with older, slower central-computing chips. The Intel 80386 chip for IBM compatibles and the Motorola 68020 processor for the Macintosh II can run most older software several times faster than it could be run on early models. These microprocessors allow more efficient use of internal RAM, further improving performance.

### ADDING SPEED TO OLD WARHORSES

If you want to increase your computing speed, you may not want or need to buy a new machine. An add-on circuit board (and a little manual dexterity and patience) may be all you need to assemble an upgraded system boasting top speed at a minimal cost.

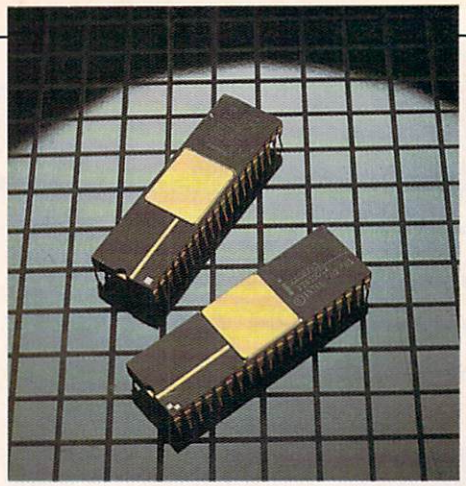
There are three kinds of hardware add-ins that will increase the performance of your computer: motherboards, accelerator cards, and math co-processors.

### MOTHERBOARDS

The motherboard, the large circuit board at the bottom of your computer, is the heart of the machine. This board contains the central processing unit (CPU) as well as all the support chips required by a computer. Changing this board is like installing a bigger engine in your car. It will give you greater speed but you don't quite get a sports car.

Replacing the motherboard isn't easy. You have to open

STEVE DITLEA *wrote the "Buyer's Guide to Hard-Disk Drives" in the February issue of* FAMILY & HOME-OFFICE COMPUTING.



Intel 8087 math co-processor

QUAD386XT accelerator card by QUADRAM

the computer case, remove any add-in cards, disconnect all wires and cables, and, in some cases, remove the disk drives. Then you remove the old motherboard, insert the new one, and reconnect everything you disconnected. This complicated procedure will take time and patience.

Motherboards are the most expensive of the three options for increasing your computer's speed. They can be useful to people who want to upgrade to a state-of-the-art machine but aren't ready to pay the full price of a new system. But if you choose to install a new motherboard, expect to spend more money in the near future to upgrade your hard drive and other peripherals to match the speed improvement. If you're upgrading from a standard PC compatible, though, you'll be able to run OS/2 as soon as the new motherboard is in place.

Ron Lockhart, a partner in the real-estate development firm Osman-Lockhart Properties in New York City, chose this method to speed up his computer. He attached an 80386-based motherboard, manufactured by Hauppauge Computer Works for $1,495, inside an empty IBM XT case ($60). He also put in an XT-style power supply ($60), a new hard drive ($400), and a disk-controller card ($125). "The instructions were clear," said Lockhart. "It worked the first time out."

For less than half of the cost of a state-of-the-art personal computer, Lockhart has a system capable of speeding along at 16MHz. It also boosts his Generic CAD graphics package for estimating square footage of a plot of land and decreases the calculation time of his sprawling 142K spreadsheet. As for his *XyWrite* word-processing software—already the fastest of its kind on slower machines—Lockhart said, "It's blinding on this system."

## ACCELERATOR BOARDS

If you're not willing to gut your current computer, there is also the plug-in alternative: accelerator boards. These boards look similar to other expansion boards—video cards, disk-controller cards, and modems, for example—that fit into one of your computer's expansion slots.

IBM

Accelerator cards fall in the middle of the price spec-

## WHAT ARE THE COMPONENTS OF SPEED?

The speed of any computer is determined by four major components: the microprocessor used, its clock speed, the RAM chips, and the hard drive. For the fastest speed, each of the four must be matched to take full advantage of the others. Although upgrading one of these components will speed up your computing, your computer won't reach its full potential until you change the other components to match.

### MICROPROCESSOR

The speed of the microprocessor is determined by two factors: the width of its data path and the clock speed. The data path determines the amount of information that the microprocessor can work with at one time; the more information, the quicker the microprocessor. The data path can be compared to a highway; if you have an 8-bit microprocessor, such as the 8088 and 8086 chips used in IBM PC compatibles, you're on a one-lane road. If you move up to a 8/16-bit processor, or two-lane road, twice as much information can be processed at once. Both the 80286 chip used in the IBM AT and compatibles and the 68000 chip used in Macintosh computers are 16-bit processors.

At the high end are the 80386 and the 68020 chips used in the IBM PS/2 Model 80 and the Macintosh II, respectively. These are both 16/32-bit processors, which can process four times as much information at one time as the 8086 can.

### CLOCK SPEED

All microprocessors are regulated by a crystal-controlled clock circuit. This clock acts like a metronome, setting the beat for the various functions within your system. The faster the beat, the quicker your cursor moves through a document file or the numbers cascade through your budget model. The most common measure of personal computer speed is the clock's rate of operation. The first IBM PCs clocked in at 4.77MHz (1MHz equals 1 million cycles per second) and the original Macintosh sped along at 7.8MHz. Currently the 68020-equipped Macintosh II revs at 15.7MHz while the hot, 80386-based IBM compatibles zip along at 16 to 20MHz. (The Macintosh Plus and SE still operate at 7.8MHz.)

When you change the motherboard or insert an accelerator card, you are changing the microprocessor and the clock speed of a computer.

### RAM CHIPS

Memory chips come in two basic types: dynamic and static. Dynamic RAM chips, used in virtually all personal computers to date, require frequent pulses of electrical power to retain their contents. Until memory is refreshed, the central processor must wait before executing each instruction; such "wait states" can reduce performance by a third or more. One way to create a "zero wait state" computer without such delays is to use more expensive and less compact static memory chips, which need no refresh.

### HARD DRIVES

Rounding out the improvements in the latest, hottest computer systems are faster hard-disk drives. Where access time to a random bit of information is measured in thousandths of a second, the 40 millisecond average that once marked IBM AT compatibles as speed demons has been improved to 16 milliseconds on the top-rated 80386-based machines. Hard-disk drives rated as fast as 20 milliseconds are available for the Macintosh II. Changing the motherboard or inserting an accelerator card will have absolutely no effect on the hard drive of a computer.

# A SAMPLING OF SPEED-UP OPTIONS

## 80386 MOTHERBOARDS FOR IBM COMPATIBLES

| Product<br>Company | Price | Clock Speed | Warranty | Supports OS/2 | Memory |
|---|---|---|---|---|---|
| Dyna SX386[1]<br>Dyna Computer Inc | $1,650 | 16MHz | 1 year | Y | 1MB |
| Hauppauge 386 Motherboard[1]<br>Hauppauge Computer Works, Inc | $1,695 | 16MHz | 1 year | Y | 1MB |
| MicroFrame 386[1 2]<br>Monolithic Systems Corp. | $1,916 | 16MHz | 1 year | Y | None |

## 80386 ACCELERATOR CARDS FOR IBM COMPATIBLES

| Product<br>Company | Price | Clock Speed | Warranty | Supports OS/2 | Memory |
|---|---|---|---|---|---|
| PC-ELEVATOR 386<br>Applied Reasoning Corp | $1,795 | 16MHz | 1 year | N | 1MB |
| Inboard 386[2]<br>Inboard 386/PC<br>Intel Corp | $1,395<br>$995 | 16MHz<br>16MHz | 5 years<br>5 years | Y<br>N | None<br>1MB |
| Jet 386<br>Orchid Technology | $1,299 | 16MHz | 4 years | Y | 8K |
| Quad386XT[1]<br>Quadram Corp. | $1,195 | 16MHz | 1 year | N | 1MB |

## 80286 ACCELERATOR CARDS FOR IBM COMPATIBLES

| Product<br>Company | Price | Clock Speed | Warranty | Supports OS/2 | Memory |
|---|---|---|---|---|---|
| Hot Shot/286<br>AST | $645 | 10MHz | 2 years | N | None |
| Microsoft Mach 20[2]<br>Microsoft Corp | $495 | 8MHz | 1 year | Y | None |
| TwinTurbo 12<br>Orchid Technology | $645 | 12MHz | 4 years | N | 8K |
| Breakthru 286-12[1]<br>Personal Computer Support Group | $395 | 8MHz | 1 year | N | None |
| Mothercard 5.0[1]<br>SOTA Technology | $895 | 10MHZ | 1 year | Y | 1MB |
| Tandy 286 Express<br>Tandy Corporation | $399 | 8MHz | 90 days | N | 8K |

## 68020 ACCELERATOR CARDS FOR MACINTOSH

| Product<br>Company | Price | Clock Speed | Warranty | Memory |
|---|---|---|---|---|
| Prodigy 4<br>Levco Corp. | $3,499 | 16MHz | 90 days | 4MB |
| Mac20MX[1]<br>Novy Systems | $995 | 16MHz | 6 months | 1MB |
| Accelerator 25<br>Radius Inc | $1,695 | 25MHz | 90 days | 32K |
| TSI-020<br>Total Systems Integration | $1,195 | 16MHz | 90 days | None |

## 68000 ACCELERATOR CARDS FOR MACINTOSH

| Product<br>Company | Price | Clock Speed | Warranty | Memory |
|---|---|---|---|---|
| Mac Adapt TurboSE<br>SiClone and Sales Engineering Corp. | $599 | 16MHz | 1 year | None |
| SpeedCard<br>SuperMac Technology | $399 | 16MHz | 1 year | 16K |

## 65C02 ACCELERATOR CARDS FOR APPLE II

| Product<br>Company | Price | Clock Speed | Warranty | Memory |
|---|---|---|---|---|
| TransWarp<br>Applied Engineering | $219 | 3.6MHz | 5 years | 256K |
| Accelerator IIe<br>Titan Technologies, Inc. | $219 | 3.6MHz | 1 year | 80K |

## MATH CO-PROCESSORS

| Product<br>Company | Price | Clock Speed | Warranty |
|---|---|---|---|
| Intel 8087[1]<br>80287-6[1]<br>80387-16[1]<br>Intel Corp | $175<br>$295<br>$795 | 5MHz<br>6MHz<br>16MHz | 5 years<br>5 years<br>5 years |
| Motorola 68881[1]<br>Motorola, Inc. | $129 | 12MHz | 1 year |

[1]Also available in a faster model; [2]Memory available as an option; K = Kilobyte; MB = Megabyte; MHz = Megahertz; N = No; Y = Yes

## MANUFACTURERS

AST (714) 756-4945; Applied Engineering (214) 241-6060; Applied Reasoning Corp. (617) 492-0700; Dyna Computer, Inc. (408) 943-0100; Hauppauge Computer Works, Inc. (516) 434-1600; Intel Corp. (503) 629-7354; Levco Corp. (619) 457-2011; Microsoft Corp. (206) 882-8080; Monolithic Systems Corp. (303) 790-7400; Motorola, Inc. (312) 397-5000; Novy Systems (904) 427-2358; Orchid Technology (415) 683-0300; Personal Computer Support Group (214) 351-0564; Quadram Corp. (404) 923-6666; Radius Inc (408) 434-1010; SOTA Technology (408) 245-3366; SiClone Sales and Engineering (408) 748-0511; SuperMac (415) 964-8884

trum and are best suited for users who want general speed increases at a cheaper price. Things to look for are compatibility with your computer and the size slot that it requires. If you want to use OS/2, check with the manufacturer first; some of these boards will not run OS/2.

Installing an accelerator board is easier than installing a new motherboard because you don't have to disconnect cables and wires. You simply pick an empty slot and insert the board. In some cases, you'll have to remove or replace the original CPU, which requires patience and meticulous work because the pins on the microprocessors can easily be bent or inserted incorrectly.

Once installed, the processor on the expansion board controls your computer, supplanting your original processor. For systems with a free expansion slot, a plug-in accelerator board is the quickest way to up your computer's speed.

David Grey, an optical-systems designer working out of his home in Vermont, installed an 80386-based board to speed up his IBM PC XT and PC AT computers to run his lens analysis and design programs. "I've saved more than 10 hours a week since I installed a 386 board in my AT system," Grey estimates. His choice was an Applied Reasoning PC-ELEVATOR 386, which took him half an hour to install. Running at 16MHz, the $1,795 accelerator has sped his calculations "by a factor of three or four," says Grey.

Users of first-generation IBM PC compatibles can gain appreciable performance improvements with less than state-of-the-art equipment. Although the 80386 chip defines the leading edge of processing speed, the slightly older and considerably cheaper 80286 chip can make your computer applications hum along at clock speeds as high as 16MHz. The 80286 made its debut in the IBM PC AT and has since become a standard for business computing in countless AT-style assembled systems. Since a complete 80286-based computer costs less than $2,000, a brand-new hardware package may be quite affordable.

For considerably less money ($399–$1,295), a plug-in expansion board with an 80286 processor can reach turbo speed under the hood of your old PC. An 80286-based accelerator board needn't represent a compromise when it comes to the next generation of computer software; the new Mach 20 board from Microsoft Corporation will run OS/2 as well as MS-DOS, while adding a mouse port and an optional disk controller on a single, full-length expansion board, so expansion slots aren't wasted. The best value per increase in speed is offered by Personal Computer Support Group's Breakthru 286-12 accelerator board—a no-frills version of the Mach 20 board—which runs at a brisk 12MHz clock speed.

## MACINTOSH

If you use a Macintosh—a 128K, 512K, Plus, or SE model—an add-on board can boost your computer's speed to better than a Mac II's and for considerably less cash. Unfortunately, only SE owners can simply slide an accelerator board into an expansion slot; add-ons for models manufactured before the SE may be tricky to install, requiring a dealer's assistance. Accelerator boards for the Mac can also include on-board RAM, connectors for a large-screen monitor, and room for an optional 68881 math co-processor. Because accelerator boards with the 68020 chip resemble the functioning of a Mac II, you may have more incompatibility problems with older software than if you use a 68000-based turbo board.

## APPLE II

If your computer is an Apple II Plus or IIe, you have two options in add-on accelerator cards. Both Applied Engineering's Transwarp and the Accelerator II from Titan Technologies use a 65C02 processor running at a clock speed of 3.58MHz—more than three times faster than an Apple II. The Transwarp includes 256K of RAM, while the Accelerator IIe provides 80K of memory.

### MATH CO-PROCESSORS

Frequent users of number-crunching software may find the biggest speed improvement with a modest hardware add-on: a math co-processor, a chip designed to work with a particular processor, such as the 8088, 80286, or 68000. Every time the computer encounters a mathematical calculation, the information is sent to the math co-processor. The co-processor then uses special circuits to perform the calculation. On the average, adding a math co-processor will decrease calculation time by 50 percent.

Math co-processors are best suited for users who just want to speed up their spreadsheet calculations and CAD programs. They are relatively inexpensive when compared to accelerator boards and motherboards and will work with your computer if you purchase the correct microprocessor. Installation is as easy as inserting the chip into the proper socket on the motherboard.

For IBM compatibles, you'll have to discover which of the Intel math chips—the 8087, 80287 or 80387—is compatible with your system's microprocessor and clock speed. For Mac users, there's only one co-processor available—the Motorola 68881—and it can be used only if there's room on your add-on accelerator board. If your applications are primarily text-oriented—such as word processing or data management—a math co-processor will have little or no effect on execution speed.

### SPEED TRAPS

At times, adding all of this extra speed can backfire. Take it from Ben Meiry of White Plains, New York, who inserted a Hauppauge Computer Works 386 Motherboard into his IBM PC XT compatible. After reassembling his computer, he noticed that his original hard drive "ran slower than normal." So Meiry also had to upgrade his hard-disk controller card ($200) to one designed for the higher speed. But once he installed the board, Meiry was very pleased with his computer's performance.

For newer Apple II and Macintosh computers, accelerated performance and changes to the system's built-in identity stored permanently in Read-Only Memory (ROM) have made many earlier software versions incompatible.

Your favorite peripherals and programs should be tested for compatibility with an accelerator card or new motherboard, just as with any new high-speed system. In addition to mismatches due to faster clock speeds, plug-in turbo boards may not conform to a computer's internal timing, omitting pauses, or "interrupts," which are necessary for the proper functioning of keyboards, disk drives, and other essential hardware.

Despite these potential problems, the time savings of increasing your computer's speed can make it well worth the investment in time and money. Now that he has assembled an upgraded system that's as fast as the speediest state-of-the-art IBM compatible, Ron Lockhart estimates that he saves nearly three hours a week in waiting time when running spreadsheets and graphics software. In addition, he saved approximately $2,000. ■

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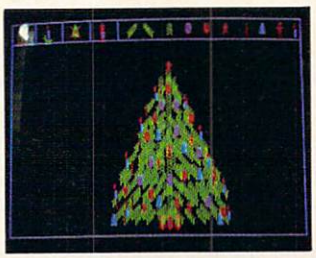

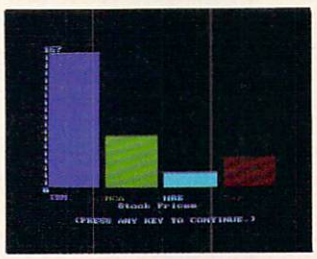

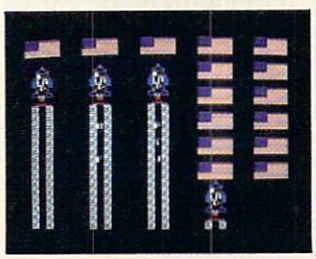

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# PRODUCT REVIEWS

## EVALUATIONS OF COMPUTERS, PERIPHERALS, AND OTHER HOME-OFFICE EQUIPMENT

### AT&T Two-Line Telephone 412

MANUFACTURER: AT&T
ADDRESS: 4 Campus Drive, Room N2C06, Parsippany, NJ 07054; (800) 222-0300
SUGGESTED LIST PRICE: $130

Once upon a time, all phones sounded more or less the same, and no one thought much about them—except which color to order and whether the wall-mounted Princess would make the kitchen look more modern.

But after the federally mandated breakup of AT&T in 1984, more and more people began buying their own phones instead of leasing them from the phone company, and all kinds of companies started making them. You could buy a phone for around $10—a step-up from a tin-can telephone, but not exactly suited for the complexities of long-distance dialing.

You won't have any problems dialing long distance with the AT&T Two-Line Telephone 412; it's as clear as a bell no matter where you're calling. In that sense, it's an old-fashioned phone, as you might expect from AT&T. But in other ways, it's thoroughly modern; there's even a volume-control switch to make the incoming volume louder or softer. This and other features make it well suited for the home office.

The phone has two lines—the minimum a home-office owner needs *(see "Setting Up a Professional Phone System" in the July issue)*. Each of the two lines has a separate ringer that can be adjusted to low or high, indicating the ringing line.

If you're on one line and there's an incoming call, you can put the first line on Hold while you answer the second line. Once you pick up the second line, you can push the conference button (CONF), and you will be connected to both parties at once. You can then switch to a private conversation with one caller and back to a three-way conference call.

Besides having the standard mute and flash buttons, the 412 has a number of other useful dialing aids. The numbers are illuminated from underneath by a soft green light, which is helpful for dialing at night. All controls are visible and within easy reach. By hitting just one key, any of 12 numbers stored in memory can be dialed.

**The volume control and separate ringer make this AT&T two-line phone a winner.**

One feature I particularly like, since I live in a pulse-dialing area, is the tone-control button. When I encounter a corporate voice-mail system and am asked for a touch-tone code, I can press tone and the code. Otherwise, I am left waiting for an operator while my long-distance charges mount.

One odd aspect of the phone is that it has only one jack. The line from that jack plugs into a two-line jack that goes into the wall. However, if you want to use one line for a modem or facsimile phone, as I do, and *also* connect it to an outgoing phone line for voice calls, you'll need another two-line jack. It's an inexpensive Radio Shack or AT&T Phone Center item, but it does point out that the phone designers didn't think through all the details.

All in all, the two-line 412 phone is a pleasure to use. It looks good, the sound quality is great, it can be mounted on a wall or placed on a desk, and it comes with a two-year limited warranty. —NICK SULLIVAN

CIRCLE READER SERVICE 100

### Amdek Monitor/732

MANUFACTURER: Amdek Corp., a subsidiary of Wyse Technology
ADDRESS: 1901 Zanker Road, San Jose, CA 95112; (408) 436-8570 or (800) PC-AMDEK
HARDWARE REQUIREMENTS: IBM PC/XT/AT, IBM PS/2 Model 50/60/80, or compatible with VGA card
SUGGESTED LIST PRICE: $625

The Amdek Monitor/732 looks a lot like IBM's own PS/2 monitors. In fact, it's a replica of the IBM Model 8513, which, like the Amdek, is sculpted on a small scale, stands on a tilt–swivel pedestal, and uses a picture tube with a matte-surface 12-inch (diagonal) screen.

The Amdek Monitor/732 will handle the VGA color signals produced by the IBM PS/2 line of computers—from the Model 50 on up—and any third-party VGA cards. As a VGA monitor, the 732's resolution is 640-by-480 dots (or pixels). The more dots, the sharper the picture. By comparison, CGA resolution is 640-by-200 and EGA is 640-by-350. The Amdek/732's .28mm dot pitch (the lower the number, the better) puts it comfortably into the company of the monitor world's elite. Indeed, many high-quality monitors use a .31mm dot pitch. Run-of-the-mill CGA monitors are much cruder, with numbers in the forties (typically, .43mm).

The power and text switches are push buttons, and the brightness and contrast are small spheres. To adjust the screen appearance, you spin each ball on its axis. I can see no purpose for this arrangement beyond novelty. Adjustments for horizontal and vertical hold, size, and position cannot be made by the user. Either Amdek is comfortably sure of itself or someone on the design team decided to cut corners. I don't use the position adjustments often, but I like to know I can. The picture on my test unit tilted slightly downward to the left (probably because of rough handling during shipping), and perhaps having these

**The Amdek/732 has an impressive .28mm fine-dot pitch.**

adjustments available would have helped. Surely, the company doesn't want the user to open the monitor and poke around inside to tweak the picture! Overall, the image was free of distortion and evenly sharp across the screen.

The 732 appears to be carefully made and solidly packaged, weighing a bit more than 23 pounds. It runs slightly above room temperature and draws a modest 85 watts of power. Setup consists of nothing other than plugging the permanently attached power cord into a socket and connecting the video cable. No switch selections are required to adapt the monitor to the video board. It comes with a one-year warranty and a mere breath of a manual—a 3.5-by-5-inch leaflet.

Colors are somewhat muted, lacking the intensity (saturation) of, say, the Zenith Flat Technology Monitor ZCM-1490 *[reviewed in June's Product Reviews]*, which has a fresh-apple snap I find visually beguiling. Nevertheless, the general effect of the Amdek color rendition is pleasant.

The Amdek Monitor/732 lists at $625, but is being sold for about $500. I would look this monitor over at my computer store.

—HENRY F. BEECHHOLD

CIRCLE READER SERVICE 101

## Cobra CP-473S Two-Line Cordless Phone

MANUFACTURER: Cobra Consumer Electronics Group, Dynascan Corp.
ADDRESS: 6500 West Cortland St., Chicago, IL 60635; (312) 889-8870
SUGGESTED LIST PRICE: $250

Sleek, stylish, and chic, this two-line cordless phone from Cobra is the best-looking cordless phone I've ever seen. With its matte-black finish and streamlined design, you'll feel like James Bond when you dial. Although the sound quality sometimes falls below 007's standards, the Cobra CP-473S remains a front-runner in the cordless phone market.

On the positive side is its capacity to handle two telephone lines, a feature I found to be unusual among cordless phones. This is a boon to the home-office worker who has more than one telephone line. The two-line capability is simple to use. By pushing two easy-to-find buttons on the handset, you can put one call on hold and talk on the other line. Also, the power of the signal stays strong on both lines. Home-office workers who have only one line

**The Cobra CP-473S is a front-runner in the cordless phone market.**

might still be interested in the Cobra CP-473S if they look at it as a phone that can grow with their business; it works just as well in offices that have only one line.

The Cobra is loaded with enough features to make any button junkie happy. It offers automatic redial and memory dial (capable of holding up to nine numbers) and the standard Hold, Page, and Flash, as well as the warning lights found on most cordless phones. Page lets you summon someone who is near the base of the phone, and Flash can be used to take advantage of custom-calling services, such as call-waiting and three-way calling. The volume control that adjusts the loudness of a caller's voice, however, is not a cordless-phone standard and is a good idea.

But these are minor features when compared with the conference button. Because the Cobra has two-line capability, it can handle three-way conversations (or conference calls), an effective way to carry out important telephone meetings.

The report on line quality, however, is mixed. Since I live in an apartment, I took the phone over to a friend's house and walked all over his property while talking on the phone. The range of the phone is remarkable; the base was in a second-floor bedroom, while I was at least 75 yards away in the backyard, and the signal remained as strong as if I were standing next to the base. There was some static and noise on the line, but according to the people I spoke to on the phone, only I could hear it.

Of all the cordless phones I have tested, the Cobra phone was the most sensitive to interference from electrical appliances or fluorescent lighting, for instance. At times, the interference was so bad that I was forced to call people back on another phone. This problem, however, does not occur with regularity, and as a rule, the line quality was strong and clear. Nevertheless, it is a real shame, because the problem may be enough to dissuade buyers.

—MARTIN BIHL

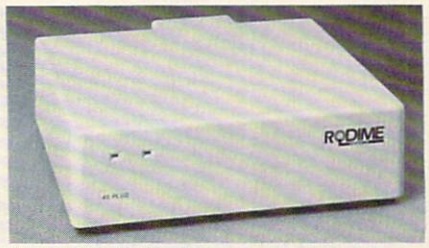
CIRCLE READER SERVICE 102

## 45 Plus Hard-Disk Drive

MANUFACTURER: Rodime, Inc.
ADDRESS: 29525 Chagrin Blvd., Suite 214, Pepper Pike, OH 44122; (216) 765-8414
HARDWARE REQUIREMENTS: Macintosh Plus/SE/II
SUGGESTED LIST PRICE: $1,595

One advantage of the SCSI (Small Computer Systems Interface) port on the Macintosh Plus, SE, and II is the simplicity of installation of peripherals such as a high-speed scanner or an external hard-disk drive. That advantage became clear when it took me less than 15 minutes to unpack Rodime's 45 Plus hard-disk drive and get it up and running.

However, if attaching it was all I'd done, the Rodime 45 Plus Drive would not have run at peak performance. The review unit was preformatted for a Macintosh Plus—the documentation mentioned only the Plus—yet I tested it on a Mac SE. The SE formats a hard-disk drive differently than the Plus does, and therefore, the speed at which data is transferred is different.




**The 45 Plus Drive is a speedy external hard drive for the Macintosh from Rodime.**

The great speed at which the 45 Plus launched programs and loaded data (conspicuously faster than the SE's built-in 20MB drive) was a definite advantage. Also a plus is the drive's apparent durability. I filled it to its 40MB-plus brim with hundreds of data files and applications, made dozens and dozens of file transfers over several months, and the drive never gave me any trouble. Further trouble was forestalled by the included Fifth Generation Systems' *Fastback* software for backing up hard-disk drives.

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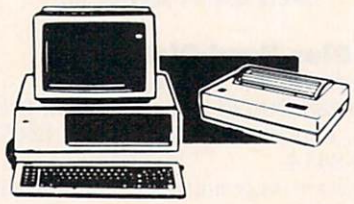

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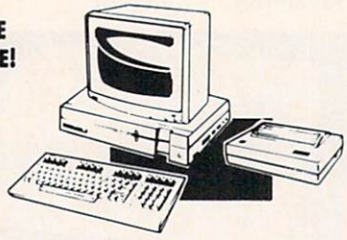

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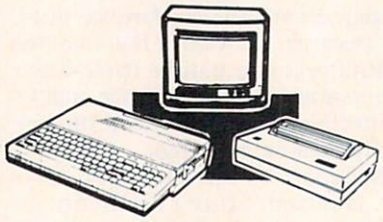

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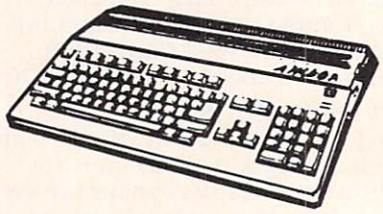

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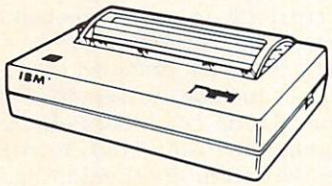


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## 720 CPS 15" Printer

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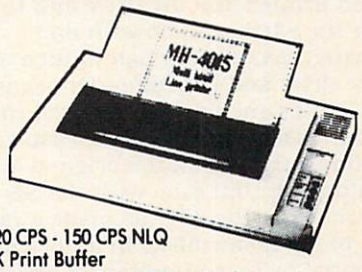


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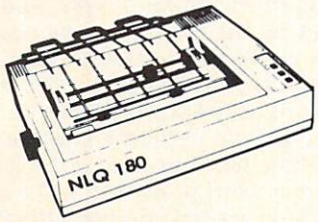


- High Speed Dot Matrix
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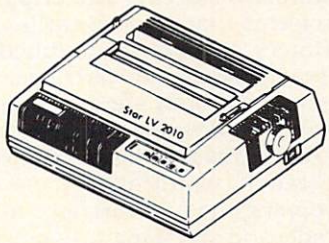


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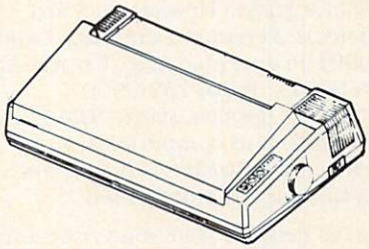

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CIRCLE READER SERVICE 6

Three drawbacks kept the 45 Plus from reaching perfection. First, my drive only held 43.5MB, even though the manufacturer claimed a 45MB average formatted capacity. Second, I wish the drive had one or two switched electrical outlets on the back, so I could plug both my SE and printer into the drive and turn on the whole system with one switch. As it was, I had to turn on the drive and the computer separately (either one first). And third, the 45 Plus's fan was loud. It wasn't as loud as the fan on the original Macintosh SE, but even with the SE turned off, the 45 Plus made a racket in my home office. In an office shared by several people, however, the noise really wouldn't be noticed.

Conclusions? The drive's strengths are more prominent than its weaknesses. A large, fast, and durable hard-disk drive is always a pleasure to work with. Although it's more expensive than some other external SCSI drives for the Mac with similar capacity, when purchased at a discounted price, the Rodime drive can be a good value. If you're shopping for an external hard-disk drive, the 45 Plus rates a long look.

—DAVID HALLERMAN

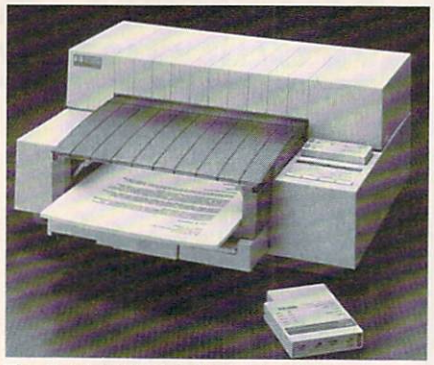
CIRCLE READER SERVICE 103

### Hewlett-Packard DeskJet Printer

MANUFACTURER: Hewlett-Packard
ADDRESS: Personal Computer Group, 19091 Pruneridge Ave., Cupertino, CA 95014; (800) 752-0900
HARDWARE REQUIREMENTS: IBM PC/XT/AT, PS/2, and compatibles, Apple II series, Macintosh 512K/SE/Plus
SUGGESTED LIST PRICE: $995

You've decided that your near-letter-quality dot-matrix printer just doesn't cut it anymore. All those laser-printed letters and reports from $2,000 printers that come your way are embarrassing your old clunker. Have you heard about the Hewlett-Packard DeskJet? Even though its graphics imaging isn't quite up to laser quality, you'd be hard pressed to distinguish a page of DeskJet text from that of a $2,595 Hewlett-Packard LaserJet II. At a list price of $995 and discounted prices as low as $695, the DeskJet could be the printer upgrade you want.

The DeskJet looks a bit odd as printers go—rather like a hybrid laser printer. It has a cut-sheet feeder,



**The Hewlett-Packard DeskJet Printer produces letter-quality output for less than $1,000.**

and up to a hundred sheets can be loaded at one time. There is no provision for fanfold or roll-fed paper, but it will print envelopes easily. In fact, there are two keypad controls just for envelope printing.

The heart of the DeskJet is Hewlett-Packard's third generation inkjet system. Images are created with dots, but they are formed by droplets of ink shot at the paper. The ink is thermally dried, so that when a page is ejected, it will not smudge. The DeskJet's image resolution is exactly the same as that of popular laser printers, 300-by-300 dots per inch. Hewlett-Packard modestly labels this "near-letter quality," but even with an 8x jeweler's loupe, I couldn't see dots.

Hewlett-Packard's inkjet design eliminates clogging and dripping, problems that plagued earlier inkjet printers. The printhead functions as a cradle for the ink cartridge, which comes with both ink and integral heat circuitry. Installing or replacing cartridges is a fuss-free, white-glove operation, requiring no more than dropping the new cartridge into the cradle and snapping it home; there are no screws or adjustments to make.

Built into the printer are two fonts: Courier and Courier Bold, which can be printed at 5, 10, 16.67, and 20 characters per inch and in 6- and 12-point sizes. For special printing needs, 13 font cartridges—emulating Hewlett-Packard's LaserJet font cartridges—are available for about $75 apiece. There's even a font downloadable from disk, though to use it you must add a 128K RAM cartridge ($75) to enable the printer to store the information. The only native memory is a 16K print buffer, which is much too small to store font information.

The keypad, with its eight push-buttons and seven status lights, provides for font and mode selection, envelope management, system reset, and the usual printer controls: on-line/off-line and form feed.

The two font-cartridge slots are located immediately behind the keypad. When inserted, the cartridges become display panels. Each has status lights indicating which font is currently in use. Fonts can be selected from the keypad or via software. The disk included with the printer includes drivers for *Framework*, Lotus *1-2-3*, Lotus *Symphony*, Microsoft *Word*, *WordPerfect*, and *WordStar 2000*. Additional drivers can be obtained as they are updated at no cost by returning a response card or going to your dealer.

The DeskJet, powered by a hefty external power pack, weighs a little more than 14 pounds and measures approximately 17-inches-by-8-inches-by-15-inches. It is constructed mostly of high-density, high-impact plastic.

Since the DeskJet comes with parallel and serial interfaces, you can attach almost any computer to it. At an extra cost, Hewlett-Packard will supply cables specially configured for all IBM PC/XT/AT and PS/2 computers and compatibles, as well as the Apple II series and the Macintosh 512K/SE/Plus.

Setting up the printer amounts to inserting the print cartridge, plugging in the power supply, and connecting the interface cable. Loading the paper couldn't be simpler—just drop up to 100 sheets into the receiving tray and the paper-handling mechanism performs flawlessly. In no time flat, I printed out a letter from a word processor and a piece of graphic scribble drawn with *PC Paintbrush*, which had been installed for my Hewlett-Packard LaserJet+ printer. There's a lot of whirring and clicking involved, but it comes primarily from the printhead's movement. After all, the only actual impact is that of the ink droplets hitting the paper.

If your software works with the LaserJet printer, you should have no problems using it with the DeskJet. Graphics printing is glacially slow but, of course, actual speed will depend on the complexity of the image. For straight text, Hewlett-Packard claims a print speed of 120 characters per second (cps) in the letter-quality mode and 240 cps in the draft mode.

At easily obtainable discount

prices, the DeskJet is a real bargain for anyone searching for a "super printer" but unwilling to move into the high-priced laser-machine neighborhood. What makes this printer especially attractive—beyond its built-in features—is the Hewlett-Packard name, which implies user service and support and a full line of enhancements.

The DeskJet comes with a one-year limited warranty. Customer relations efforts are first rate, with a friendly voice always available at the other end of the line—toll free.

—HENRY F. BEECHHOLD

CIRCLE READER SERVICE 104

### NEC MultiSpeed HD Laptop Computer

MANUFACTURER: NEC Home Electronics, Inc.
ADDRESS: 1255 Michael Drive, Wood Dale, IL 60191; (312) 860-9500
SUGGESTED LIST PRICE: $3,695

In the beginning, there was the MultiSpeed, and it was good. But users wanted more. So NEC went back to work and created two new laptop computers—the MultiSpeed EL and the MultiSpeed HD—which are also good. Very good. Particularly the HD.

First the facts: The MultiSpeed HD is a 14-pound IBM PC XT-compatible laptop computer that comes with a two-speed microprocessor, 640K of RAM, one 3.5-inch floppy drive, a 20MB hard-disk drive, and MS-DOS 3.20. It has an 85-key keyboard, with a separate numeric keypad and 10 function keys. It's CGA compatible and has an electroluminescent backlit, supertwist screen. Along the back of the computer are a parallel port, a serial port, an external CGA monitor port, a floppy-disk controller/floppy-disk expansion port, and a reset switch. All of this means that about the only things you need to buy are parallel and serial cables.

The MultiSpeed gets its speed from a microprocessor that can operate at either 4.77 (the normal IBM PC speed) or 9.54MHz. Besides the microprocessor speed, the MultiSpeed HD also has a 20MB hard-disk drive. It was nice to be able to load all my programs onto the hard drive and take the computer anywhere to do my work. The auto-park feature helps prevent the hard-disk drive from crashing, as a result of being bumped or shocked—except if you're actually reading or writing a file when this happens. You are less likely to lose data because when the machine is turned off, the read–write heads are moved to a section of the hard drive that doesn't contain any data.

### NEC MULTISPEED HD LAPTOP SPECIFICATIONS

MICROPROCESSOR: NEC V-30 (4.77/9.54MHz; Intel 8086 compatible)
MEMORY: 640K of RAM
OPERATING SYSTEM: MS-DOS 3.20
WEIGHT: 14.3 pounds
DIMENSIONS: 3.6-by-13.7-by-12.5 inches
BUILT-IN PORTS: Four (parallel, serial, RGB monitor port, and floppy-disk controller/floppy-disk expansion port)
EXPANSION SLOTS: Two for optional modems, 1200 bps and 2400 bps
DISK DRIVES: 3.5-inch floppy and 20MB hard-disk drive
DISPLAY: Electroluminescent backlit, supertwist LCD
SOFTWARE INCLUDED: Three desk utilities, two application programs, and a *Setup* program in ROM, MS-DOS 3.20
WARRANTY: One year

The display on the MultiSpeed HD is an electroluminescent backlit, supertwist screen with contrast and brightness controls. I found the screen to be easy to read in just about any lighting conditions.

The MultiSpeed has a standard XT keyboard with only a few differences. The Caps Lock and Print Screen keys have been moved to the lower right, and the numeric keypad sits above the keyboard on the right side. These changes in layout were strange for me when I first started using the MultiSpeed HD, but I soon grew accustomed to them.

Besides the layout of the keys, the two other features distinguishing this keyboard from others are the presence of special Pop Up and Help keys. The Help key, when pressed, will bring up a window that gives you information about the MultiSpeed HD and some of its features.

CIRCLE READER SERVICE 27

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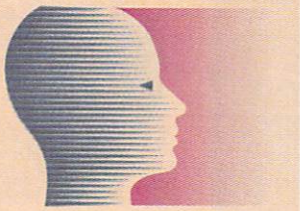

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# PRODUCT REVIEWS

The Pop Up key is more fun. When pressed, it brings up a menu of six easy-to-use ROM-based programs—*Telecom*, *Outliner*, *Filer*, *Dialer*, *Notepad*, and *Setup*. At times, I used these programs instead of *SideKick*. What I like most about them is that they don't reside in RAM and don't take up any valuable memory space. If you want, you can use a utility that comes with DOS to suppress the utilities.

The MultiSpeed comes with four wire-bound manuals—*User's Guide*, *Introduction to MS-DOS*, and two other software manuals. All four are well written and easy to read.

The NEC portable also includes some little extras such as a cable to connect an RGB monitor, an external floppy-disk drive cable, and an external transfer cable (to make transferring files from your desktop to the MultiSpeed easier).

But a perfect computer it is not. Because of the electroluminescent backlit, supertwist display and the hard-disk drive, the battery can run out in less than two hours. The battery will last longer (about six hours) if you don't use or only partially use the backlighting and hard-disk drive, but these are the computer's best features.

Also, you need to buy the computer's carrying case (black rigid, $129; leather, $249). The AC power supply is big and bulky, and the ports in the back of the computer are only covered by small plastic covers. (I had to search high and low for the parallel port cover after I used the printer.)

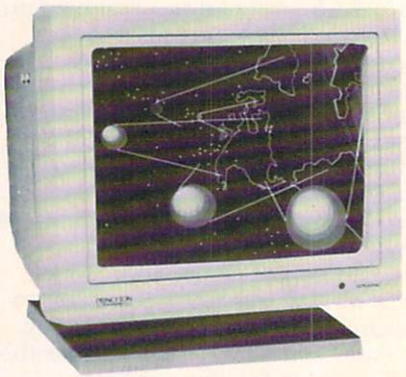
Overall, this is a good computer. I would recommend the NEC MultiSpeed HD and would consider buying it myself. —PASQUALE CIRULLO

CIRCLE READER SERVICE 105

### Princeton Graphic Systems Ultrasync Monitor

MANUFACTURER: Princeton Graphic Systems
ADDRESS: 601 Ewing Street, Building A, Princeton, NJ 08540; (609) 683-1660
HARDWARE REQUIREMENTS: IBM PC/XT/AT and compatibles or IBM PS/2 with CGA, EGA, VGA, or Monochrome Graphics output, Macintosh/SE/II
SUGGESTED LIST PRICE: $849

The latest buzzword in monitor electronics is *multisync*, pioneered by NEC. The term stands for "multisynchronization," circuitry in the monitor that adjusts to a range of video boards. Naturally, all the big names in monitors have jumped into the multisync game, including Princeton Graphics, whose Ultrasync monitor represents the top of its line of nonspecialized monitors priced at less than $1,000.



**Princeton Graphic Systems Ultrasync Monitor: One of the best monitors available.**

The Ultrasync's multisynchronous operation figures out what kind of video board it's plugged into and adjusts itself accordingly. If you prefer to work in the "text mode," you can switch manually among several display color combinations: green, amber, or cyan on black, as well as white on blue.

The Ultrasync's maximum resolution—800-by-600 pixels—is among the highest available for monitors selling in its price range. Another contributor to image quality is dot pitch. Dot pitch refers to the distance between dots. The smaller the number, the finer the detail possible. The Ultrasync has a .28mm dot pitch.

The 12-inch (diagonal) black-matrix picture tube is matte-finished to reduce glare, but it is not ideal because it uses a conventional, curved-radius screen. No matter how sharp the image may be, the curved screen will distort it to some degree. Not too long ago, this would be nothing to fuss about, but Zenith's new Flat Technology Monitor has raised the standards by which we now judge display quality.

To assure instant compatibility, Princeton Graphics supplies the monitor with two cables, one with the familiar 9-pin connector; the other with the 15-pin connector that IBM has made the standard for VGA (Video Graphics Array), the color system used on the PS/2 line beginning with the Model 50.

With so much video automation at hand, you don't have to work hard

getting the monitor to function with your computer. I ran it with monochrome, CGA, and EGA outputs, displaying each at as high a quality as the signal would allow. I found the display easy on the eyes and sharp enough in the text mode for long, eyestrain-free word processing.

Ultrasync colors are bright and rich and the display seemed sharp from corner to corner. The image betrayed no tendency to ripple or roll. Should a problem arise during the first year of use, the unit is covered under the terms of a standard limited warranty.

The tilt and swivel base is tight enough to stay put where you've set it, yet not so tight that you have to muscle it into place. It looks a lot like the IBM PS/2 monitors, and it's compatible with any IBM clone system, as well as with the Macintosh.

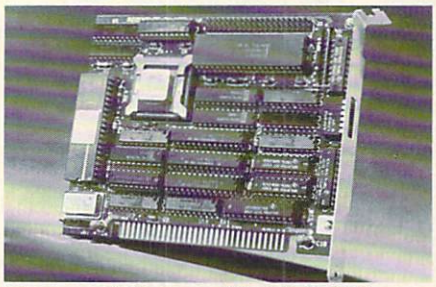
On the back panel, push buttons are provided for screen size, color, and signal mode along with a 110/220 VAC power selector and controls for vertical and horizontal size and positioning. The text button and the power switch are on the right side of the monitor. On the left side are controls for contrast and brightness. The front panel contains only a power-on light.

Without doubt, the Princeton Graphic's Ultrasync is one of the best monitors available for less than $1,000. List price is $849, but it is advertised by mail-order houses for as little as $500, a price that makes this monitor a superlative buy. If you're planning to upgrade from your CGA system to EGA or VGA display standards, the Ultrasync would be a sensible choice. Naturally, you'll also need a suitable video board to take advantage of the Ultrasync's capabilities. In case you're contemplating a IBM PS/2 computer, I would seriously consider choosing the Ultrasync over the IBM Model 8513 color monitor. The street price is comparable, the quality is superior, and it offers a wider range of video board compatibility. —HENRY F. BEECHHOLD

CIRCLE READER SERVICE 106

### 286 Express-12 Accelerator Board

MANUFACTURER: PC Technologies, Inc.
ADDRESS: 704 Airport Blvd., Ann Arbor, MI 48106; (313) 996-9690, (800) 821-3086
HARDWARE REQUIREMENTS: IBM PC/XT or compatible
SUGGESTED LIST PRICE: $645



**Turn your XT into an AT with the 286 Express-12 accelerator board.**

The 286 Express accelerator board turns a pokey 8088-based computer into a zippy 80286 AT-class machine. Technically, it doesn't really transform an 8088 computer into an AT, but it does slip an 80286 chip into your computer and speed up the machine significantly under certain conditions.

If you need the extra speed, it's a lot less expensive to pop a speed-up card into your computer than it is to outfit your home office with an 80286 machine. The speed advantage is nice if you do a lot of database work or use large spreadsheets that have many calculations to perform. Unfortunately, your hard-disk drive will be slower than an AT hard drive, and you won't be able to use AT cards or run OS/2.

The 286 Express model I tested was designed for the Tandy 1000 SX. Although the 286 Express isn't any more difficult to install than other types of boards, the documentation was a little confusing because of the differences within the Tandy 1000 line. The manual tries to reflect those differences but all it did for me was add to the confusion.

Otherwise, once you determine which computer you own, the installation is straightforward. Just remove the 8088 chip from the motherboard with the supplied extraction tool and place it on the accelerator board. Then connect the 286 Express board to the motherboard with the supplied cable.

To test the card's speed, I did a sort on a database using a 1000 SX with two floppy disk drives. It took 2:40 minutes to alphabetize 600 names. When the board was installed, the same sort took 1:40 minutes.

If you're not ready to upgrade to a faster 286 or 386 machine but want some of the speed advantages, you'll find that the 286 Express is a cost-effective compromise. —STEVE MILLER

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# SOFTWARE GUIDE

Welcome to FAMILY & HOME-OFFICE COMPUTING's Software Guide. The following table relates to the review charts that follow. It lists the various types of computers as designated under "hardware required" (and other hardware designations in this issue) and the models included under each designation.

| DESIGNATION | MODELS |
|---|---|
| Amiga | 500, 1000, 2000 |
| Apple | II, II Plus, IIe, IIc, IIGS (in IIe/c mode) |
| 64K Apple | II Plus, IIe, IIc, IIGS (in IIe/c mode) |
| 128K Apple | IIe, IIc, IIGS (in IIe/c mode) |
| Apple IIGS | IIGS only |
| Atari | 800, 600XL, 800XL, 65XE, 130XE |
| Atari ST | 520ST, 1040ST, MegaST |
| C 64/128 | C 64, C 128 (in 64 mode) |
| C 128 | C 128 only |
| IBM PC | PC, XT, AT, PS/2, and compatibles |
| Macintosh | 128K, 512K, Plus, SE, II |
| Tandy CoCo | 2, 3 |

*Please note:* All Apple designations (except for IIGS) include compatibles such as the Laser 128 or Franklin 500. Titles listed for the IBM PC will also run on most IBM PC compatibles (as well as the IBM PS/2 series); check with the publisher of the program or your dealer for compatibility. Any additional hardware listed is required unless noted as "recommended" or "optional." In many cases, "2nd drive" refers to either a floppy-disk drive or hard-disk drive. *KEY:* **O** = Overall performance, given the limitations and capacities of the particular computer for which the software is intended. **D** = Documentation, or the instructions that accompany a program. **EH** = Error Handling, the software's capacity to accommodate errors made by the user. **PS** = Play System (in the Entertainment reviews), the quality of the game's design and its playability. **GQ** = Graphics Quality, evaluated in light of each model's graphics capabilities. **EU** = Ease of Use after the initial learning period; varies from computer to computer. **V** = Value for money, or how the software measures up to its price.

## BUSINESS & PRODUCTIVITY

| Title<br>Publisher<br>Price | Brief description | Hardware required | CP | Ratings O | D | EH | GQ | EU | V |
|---|---|---|---|---|---|---|---|---|---|
| CONCISE DICTIONARY OF 26 LANGUAGES<br>Inductel, Inc.<br>18661 McCoy Ave.<br>Saratoga, CA 95070<br>(408) 866-8016<br>$50 ©1987 | For writers, businesspeople, and foreign-language students, this on-line resource shows you the equivalent word in 26 tongues. Best used with a word processor and an operating environment such as *Windows* or *DESQview*. Works swiftly, but takes up 1.5MB on disk. —CHARLOTTE PIERCE | 256K IBM PC.<br>Hard-disk drive. | N | ★<br>★<br>★ | ★<br>★ | ★<br>★ | N/A | E | ★<br>★<br>★ |
| DAC EASY LIGHT<br>Dac Software<br>17950 Preston Road, #800<br>Dallas, TX 75252<br>(214) 458-0038<br>$70 ©1987 | Accounting program designed specifically for small-business owners who have little or no accounting expertise. Easy to set up and even easier to use. Includes general ledger, accounts receivable, and accounts payable. *(See long review in Finance column.)* —STEPHEN MILLER | 256K IBM PC.<br>2nd drive. | N | ★<br>★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★<br>★<br>★ | N/A | E | ★<br>★<br>★<br>★ |
| DESIGN TO PRINT<br>Britannica Software<br>345 Fourth St.<br>San Francisco, CA 94107<br>(415) 546-1866<br>$50 ©1987 | More than an instant-print program (you can create print formats from scratch, but it's tedious) and less than real desktop publishing (all text must be typed in; no reading word-processor files), *Design to Print* is flexible but sometimes complex. —TAN A. SUMMERS | 512K IBM PC.<br>2nd drive.<br>CGA or EGA.<br>Mouse optional. | Y | ★<br>★ | ★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★<br>★ | D | ★<br>★<br>★ |
| DS OPTIMIZE<br>Design Software<br>1275 W. Roosevelt Road<br>West Chicago, IL 60185<br>(312) 231-4540<br>$70 ©1987 | Hard-disk drives may slow down over time. That's because DOS tends to store a file in separate disk sectors each time you save it. This utility rewrites all of your files to contiguous areas on the drive, thus speeding up your work when loading data. —GEORGE CAMPBELL | 256K IBM PC.<br>MS-DOS 3.0 or higher.<br>Hard-disk drive.<br>CGA optional. | N | ★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | N/A | A | ★<br>★<br>★ |
| FONT/DA JUGGLER PLUS<br>ALSoft, Inc.<br>P. O. Box 927<br>Spring, TX 77383<br>(713) 353-4090<br>$60 ©1987 | Similar to *Suitcase* (*see June*), this utility gives you access to almost unlimited fonts and desk accessories (DAs). But this package bests the competition with several more utilities for working with DAs, fonts, and sounds, too. Best for the experienced.† —RON MANSFIELD | 512K Macintosh.<br>800K drive. | N | ★<br>★<br>★<br>★ | ★<br>★ | ★<br>★<br>★ | N/A | E | ★<br>★<br>★<br>★ |
| FUNK & WAGNALLS STANDARD DESK DICTIONARY<br>Inductel, Inc.<br>18661 McCoy Ave.<br>Saratoga, CA 95070<br>(408) 866-8016<br>$80 ©1987 | On-line mirror image of F&W's *Standard Desk Dictionary* with wild cards that zip you through the alphabet. Selected definitions can be printed or stored in separate files. Similar to the *Concise Dictionary* reviewed above, it's also a memory hog and works best with such systems as *Windows*. —CHARLOTTE PIERCE | 256K IBM PC.<br>Hard-disk drive. | N | ★<br>★<br>★ | ★<br>★ | ★<br>★ | N/A | E | ★ |

**RATINGS KEY O** Overall performance; **D** Documentation; **EH** Error-Handling; **GQ** Graphics Quality; **EU** Ease of Use; **V** Value for money; ○ Poor; ★ Average; ★★ Good; ★★★ Very Good; ★★★★Excellent; N/A Not Applicable; E Easy; A Average; D Difficult; **CP** Copy Protected, yes or no; † Longer review follows chart

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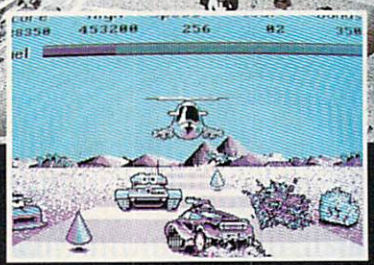
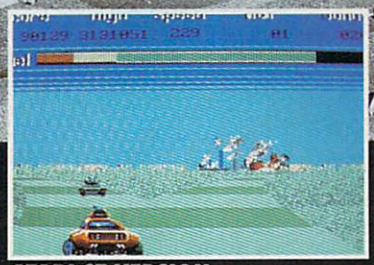


IBM AND COMPATIBLES VERSION



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## BUSINESS & PRODUCTIVITY

| Title<br>Publisher<br>Price | Brief description | Hardware required | CP | Ratings O | D | EH | GQ | EU | V |
|---|---|---|---|---|---|---|---|---|---|
| INFO-XL<br>Valor Software<br>1700 Don Ave.<br>San Jose, CA 95124<br>(408) 978-3044<br>$295 ©1987, 1988 | Information manager designed to integrate free-form text and structured data—all linked to a scheduling system. Sophisticated search functions, including approximate and partial matches, and macros that record keystrokes are two highlights.† —HENRY BEECHHOLD | 384K IBM PC.<br>2nd drive; hard-disk drive optional. | N | ★<br>★<br>★ | | ★<br>★<br>★<br>★ | N/A | A | ★<br>★<br>★ |
| JOE SPREADSHEET<br>Holt, Rinehart & Winston<br>111 Fifth Ave.<br>New York, NY 10003<br>(212) 614-3365<br>$50 ©1987 | Marketed as a low-cost, introductory spreadsheet, *Joe* is all that and more. "He" doesn't skimp on features, such as Lotus *1-2-3* compatibility, macros to automate procedures, and several financial and statistical functions. Worth a look.† —TAN A. SUMMERS | Reviewed on 320K IBM PC. Also for 512K Macintosh. CGA, EGA, or Hercules (for graphs; IBM). 2nd drive recommended. | N | ★<br>★<br>★ | ★<br>★ | ★<br>★ | N/A | E | ★<br>★<br>★<br>★ |
| SENSIBLE GRAMMAR<br>Sensible Software, Inc.<br>335 E. Big Beaver, #207<br>Troy, MI 48083<br>(313) 528-1950<br>$100 ©1987 | Electronic proofreading for punctuation and grammatical errors and commonly misused phrases. Changes proofreading from locating, and possibly missing, errors to evaluating suggested changes. However, many suggestions must be discarded. —GWEN SOLOMON | Reviewed on 512K Macintosh. Also for 128K Apple.<br>800K drive (Mac). | N | ★<br>★ | ★<br>★<br>★ | ★<br>★ | N/A | A | ★<br>★ |
| SHAKESPEARE<br>Infinity Software<br>1144 65th St., Suite C<br>Emeryville, CA 94608<br>(415) 420-1551<br>$225 ©1987, 1988 | When *Shakespeare* lets you combine graphics from a paint program and text from a word processor, you get finely polished, full-color documents. Unfortunately, the version I reviewed might have been pushed out of the door too early; it crashed too often. —TAN A. SUMMERS | 512K Amiga.<br>1MB recommended.<br>Laser printer optional. | N | ★<br>★ | ★ | ○ | ★<br>★<br>★<br>★ | A | ★ |

## EDUCATION & CREATIVITY

| Title<br>Publisher<br>Price | Brief description | Hardware required | CP | Ratings O | D | EH | GQ | EU | V |
|---|---|---|---|---|---|---|---|---|---|
| ALGEBRA SHOP<br>Scholastic Software<br>730 Broadway<br>New York, NY 10003<br>(212) 505-3000<br>$40 ©1987 | This sequel to *Math Shop* motivates teenagers to complete algebra problems as they serve customers in 10 different shopping-mall stores. An optional timer can add to the challenge. Treats a sometimes baffling subject clearly and logically. —GWEN SOLOMON | Reviewed on 64K Apple.<br>Also for 256K IBM PC. | Y | ★<br>★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | ★<br>★ | A | ★<br>★<br>★ |
| DINOSAUR CONSTRUCTION KIT: TYRANNOSAURUS REX<br>D.C. Heath and Co.<br>125 Spring St.<br>Lexington, MA 02173<br>(800) 441-4102<br>$66 ©1987 | Children uncover fossil bones, build a Tyrannosaurus Rex skeleton, and print the beast (with or without skin). As they play, kids learn about fossils, dinosaur environments, and dinosaur biology. Limited focus (T. Rex is the only featured dinosaur), and I found the display colors a bit dull. —GWEN SOLOMON | 128K Apple.<br>Color monitor, color printer recommended. | Y | ★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | ★ | E | ★ |
| FUN WITH LETTERS AND WORDS<br>Wescott Software<br>2316 Park Place<br>Evanston, IL 60201<br>(312) 328-1367<br>$20 ©1986, 1987 | Educationally sound keyboarding and early reading-skills program for parents to use with their 2- to 6-year-olds. Customize the already flexible program with words your child can understand. Graphics could be more exciting, but still an excellent value. —MARLENE BUMGARNER ELTGROTH | 256K IBM PC.<br>Color monitor recommended. | N | ★<br>★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | ★<br>★ | E | ★<br>★<br>★<br>★ |
| JEU DE PISTE<br>Gessler Educational Software<br>55 W. 13th St.<br>New York, NY 10011<br>(212) 627-0099<br>$40 ©1987 | If your French vocabulary and reading ability is equivalent to one year of high-school-practice, then you'll find this multiple-choice, educational board game challenging and fun. However, it would be more valuable if you could add your own words and phrases. —TAN A. SUMMERS | 64K Apple.<br>Spanish version also available. | Y | ★<br>★ | ★ | ★<br>★ | ★ | E | ★<br>★ |
| THE RECIPE WRITER<br>At-Your-Service Software<br>P.O. Box 315<br>Yonkers, NY 10710<br>(914) 337-9030<br>$55 ©1987 | Organizes recipes from newspaper and magazine clippings, sizes those recipes, and prints shopping lists. Can search for recipes by category but not by ingredient. Although no recipes are included, you can cross-reference to your favorite cookbooks. —TAN A. SUMMERS | 192K IBM PC.<br>2nd drive.<br>Printer optional. | N | ★<br>★ | ★ | ★<br>★ | N/A | E | ★<br>★ |

**RATINGS KEY O** Overall performance: **D** Documentation: **EH** Error-Handling: **GQ** Graphics Quality: **EU** Ease of Use: **V** Value for money: ○ Poor: ★ Average: ★★ Good: ★★★ Very Good: ★★★★Excellent: N/A Not Applicable: E Easy: A Average: D Difficult: **CP** Copy Protected, yes or no: † Longer review follows chart

## EDUCATION & CREATIVITY

| Title<br>Publisher<br>Price | Brief description | Hardware required | CP | Ratings O | D | EH | GQ | EU | V |
|---|---|---|---|---|---|---|---|---|---|
| U.S. ATLAS ACTION<br>DLM, Inc.<br>One DLM Park<br>Allen, TX 75002<br>(214) 248-6300<br>$46 ©1985 | Domestic geography game that provides hours of fun and learning for a whole family. The editor lets you prepare your own maps for others, and the analysis mode outlines your strengths and weaknesses.† —MARLENE BUMGARNER ELTGROTH | 64K Apple. | Y | ★<br>★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | E | ★<br>★<br>★<br>★ |

## ENTERTAINMENT

| Title<br>Publisher<br>Price | Brief description | Hardware required | CP | Ratings O | D | PS | GQ | EU | V |
|---|---|---|---|---|---|---|---|---|---|
| THE BARD'S TALE III<br>Electronic Arts<br>1820 Gateway Drive<br>San Mateo, CA 94404<br>(415) 571-7171<br>$50 ©1988 | *The Bard's Tale* just keeps getting better. In the third chapter of this wildly popular role-playing game, you must remove a curse from the ruined city of Skara Brae. Accessible to beginning and expert adventurers alike, this is a masterpiece!† —JEFF DONAHUE | Reviewed on 64K Apple. Also for C 64/128. Joystick. Color monitor recommended. | Y | ★<br>★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | A | ★<br>★<br>★<br>★ |
| DECISIVE BATTLES OF THE AMERICAN CIVIL WAR: VOL. ONE<br>Strategic Studies Group/EA<br>1820 Gateway Drive<br>San Mateo, CA 94404<br>(415) 571-7171<br>$40–$45 ©1987 | Strategic and tactical game covering six major Civil War battles. Play system allows you to control troops from the smallest unit to an entire army. Play against another person or the computer—or watch the computer play itself. Includes a construction set to modify games or to create new ones. —JAMES DELSON | Reviewed on 64K Apple. Also for C 64/128. | Y | ★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★ | ★ | D | ★<br>★<br>★ |
| EBONSTAR<br>MicroIllusions<br>17408 Chatsworth St.<br>Granada Hills, CA 91344<br>(818) 360-3715<br>$35 ©1987 | It's 3000 A.D. in this fast-action, strategic-arcade game, and Earth is void of pollution, crime, and corruption. For thrills, sportsmen battle it out in space as spectators watch. Exciting and imaginative. Great graphics and sound effects. —ADAM SHERWIN | 512K Amiga. Joystick. | Y | ★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★ | ★<br>★<br>★ | E | ★<br>★<br>★ |
| ECHELON<br>Access Software<br>545 W. 5th South<br>Bountiful, UT 84010<br>(801) 298-9077<br>$45–$50 ©1988 | Outer space strategy–arcade space exploration game. Learn to fly sophisticated spacecraft using a flight simulator, and then conduct peaceful scientific explorations or fight your way through space. Game utilizes innovative voice control, the Lipstik, which doesn't work very well. —JAMES DELSON | Reviewed on C 64/128. Also for 64K Apple, 256K IBM PC. Joystick or Lipstik (included). | N | ★ | ★<br>★ | ★ | ★ | A | ★ |
| FERRARI FORMULA ONE<br>Electronic Arts<br>1820 Gateway Drive<br>San Mateo, CA 94404<br>(415) 571-7171<br>$50 ©1988 | Action-packed, racing simulation puts you behind the wheel of a $400,000 Ferrari F186. Race your car around 16 of the world's most famous tracks. Highly detailed; researched to the last spark plug. Graphics make you feel as though you're really driving.† —ADAM SHERWIN | 512K Amiga. | Y | ★<br>★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★ | ★<br>★<br>★<br>★ | E | ★<br>★<br>★<br>★ |
| PRIME TIME<br>First Row Software Publishing<br>900 East 8th Ave., #300<br>King of Prussia, PA 19406<br>(215) 337-1500<br>$40 ©1988 | What's more deadly than the dungeons of *Bard's Quest XI*? The TV network's rating wars. As a big-shot programming director, you must have what it takes to make a hit show in this funny, ground-breaking game. Better than TV! —JEFF DONAHUE | Reviewed on 512K Atari ST. Also for 256K IBM PC. | N | ★<br>★<br>★ | ★<br>★ | ★<br>★ | ★<br>★<br>★ | E | ★<br>★<br>★ |
| SHILOH: GRANT'S TRIAL IN THE WEST<br>Strategic Simulations, Inc.<br>1046 N. Rengstorff Ave.<br>Mountain View, CA 94043<br>(415) 964-1353<br>$40 ©1987 | Fourth strategy and tactics game in S.S.I.'s Civil War series. An excellent scenario for intermediate–advanced players. With new faces added to simulate untried troops and gunboats. Special routing rules, road movement, and night rules. —JAMES DELSON | Reviewed on 256K IBM PC. Also for 64K Apple, 48K Atari, C 64/128. | Y | ★<br>★<br>★<br>★ | ★<br>★<br>★<br>★ | ★<br>★<br>★ | ★ | D | ★<br>★<br>★ |
| WINTER CHALLENGE<br>Thunder Mountain/ Mindscape<br>3444 Dundee Road<br>Northbrook, IL 60062<br>(312) 480-7667<br>$15 ©1987 | Multievent winter-sports arcade game. Offers competition in ski jump, downhill slalom, biathlon, and bobsled using joystick and fire button. Derivative game borrows from Epyx's *Winter Games* series. Fun to play, especially for those who haven't experienced earlier Olympic Games programs. —JAMES DELSON | Reviewed on 256K IBM PC. Also for 512K Amiga, 48K Atari, 512K Atari ST, C 64/128. Joystick. | Y | ★<br>★ | ★<br>★ | ★<br>★ | ★<br>★ | E | ★<br>★<br>★ |

**RATINGS KEY O** Overall performance; **D** Documentation; **PS** Play System; **GQ** Graphics Quality; **EU** Ease of Use; **V** Value for money; ○ Poor; ★ Average; ★★ Good; ★★★ Very Good; ★★★★Excellent; N/A Not Applicable; E Easy; A Average; D Difficult; **CP** Copy Protected, yes or no; † Longer review follows chart

# SOFTWARE REVIEWS

On the following pages, you'll find in-depth reviews of some of the programs listed in the Software Guide. Refer back to the Guide on page 52 for information such as copy protection and addresses of software publishers.

## BUSINESS & PRODUCTIVITY

### Font/DA Juggler Plus

HARDWARE REQUIREMENTS: 512K Macintosh
PUBLISHER: ALSoft, Inc., (713) 353-4090
PRICE: $60
OVERALL RATING: Excellent

If you're like me, one of the things that attracted you to the Macintosh was the wide variety of available desk accessories (DAs), fonts, sounds, and other "resources" that make a computer fun and easy to use. There are hundreds of useful DAs that calculate, tell time, remind you of appointments, and amuse. And fonts—how many fonts are there in the world, anyway?

By now, you've probably discovered the current Apple-imposed limits of 15 desk accessories, 200 fonts, and 8 FKeys (function keys) per System file. One way around this dilemma is to have different start-up disks with different combinations of resources.

But consider a second alternative: *Font/DA Juggler Plus*, which is actually a collection of programs. This package gives you access to an almost unlimited number of resources and eliminates the need to install them in your System file.

In addition, *Font/DA Juggler Plus* lets you compress fonts so that they take up less disk space. It also lets you list and see fonts in the font styles themselves. You can even preview attributes such as italic, shadow, and bold in a program's font menu.

Installation is easy. Simply drag a copy of the *Font/DA Juggler Plus* icon into your System Folder and restart the computer.

Using the *Juggler* for the first time is a little like going to sleep in your house and waking up in a 400-room hotel. You may be a little overwhelmed by the number of new choices at your disposal. *Font/DA Juggler Plus* comes with more than 50 public domain DAs ranging from the quite useful to the downright silly. You'll find screen savers, a host of clocks (including an incredible Big Ben likeness), and utilities including base converters, file snooping tools, and more.

The publisher has also included public-domain fonts, sounds, and FKeys. The sounds range from rude farm animals to replacements for the Mac's normal beep. You can preview (play) these sounds, or most others on your disks, by pressing two keys. When you find the sound you like, you can ask *Juggler* to substitute it for your Mac's normal beep sound.

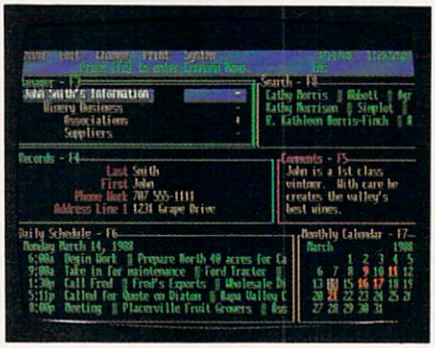
There are some compatibility problems, due to the ill-behaved nature of many DAs, the evolving Macintosh interface, and the lack of complete compatibility between the Mac II and earlier machines. AlSoft has tested *Font/DA Juggler Plus* with more than 200 DAs and provides a "Read Me" file on the disk summarizing the good and bad news.

The rest of the documentation is clear and complete, but it assumes that you are experienced with the Mac—which you must be in order to know how much the product will add convenience to your work sessions. Thus, don't expect clicking and dragging lessons here. Overall, *Font/DA Juggler Plus* is well worth its price.

—RON MANSFIELD

### Info-XL

HARDWARE REQUIREMENTS: 384K IBM PC
PUBLISHER: Valor Software, (408) 978-3044
PRICE: $295
OVERALL RATING: Very Good



*Info-XL* is an information management program that allows you to store both structured and free-form data in a single file (database). Records can be grouped and regrouped according to various search criteria, including "fuzzy" searches—a feature provided by *Info-XL*'s incorporation of Proximity Technology's sophisticated artificial intelligence logic system, Proximity-Scan. A fuzzy search does not require that you use restrictive relational operators such as "and" and "or," and it allows you to search for approximations and partial matches. In the sample file, a search for "Ford truck" will yield no instance of this entry but will turn up "Ford tractor."

The program works through six windows. One group—Manager, Records, and Comments—is used for entering data; the other—Daily Schedule, Monthly Calendar, and Search—is for retrieving information. This information can be retrieved by time or date, by word or phrase, and by category.

The Manager actually bridges the two groups since you both enter and retrieve data through its window, which is the basic organizer in the *Info-XL* system. You enter standard fixed-field data items such as names, addresses, and telephone numbers in the Records window. Free-form text is entered in the Comments window—up to 10,000 characters per comment, or about six pages of text. The Daily Schedule shows all of the Manager's headings that are tagged with the same date. Any dated information you record is entered in the Manager window and will automatically be transferred to the Daily Schedule window. Moving to the Monthly Calendar window lets you review information for a given month. Dates that have activities associated with them are highlighted, and the information is listed in the Daily Schedule window.

Finding the information you need is the whole point of using a data-management system; *Info-XL* gives you several routes to that point. Instead of listing daily events under a single heading such as "Events for the Day," you place each event in its proper context—for example, sales meetings or lunch dates—with date attached, and *Info-XL* will automatically list all events associated with that day. You might have listings of recurring events scattered throughout the information base, but when you browse the Daily Schedule and Monthly Calendar, all the events for each day will be displayed in hourly order.

Now suppose you want to hunt for information about "machine tools" that appears in a log of periodical articles you have been storing in your "International Trade" database. Your

options in the Search window are Specific, General, Loose, or Open. In this example, you might request either Specific or General. In either case, you'll get a listing of every entry that matches the query term *machine tools*. A Specific search turns up exact matches; a General search finds exact matches and close hits; and Loose search lets you look for something without knowing exactly what you're looking for. Say, for instance, all you have is the partial spelling of a name or a couple of letters. An Open search is like a Loose search but even looser; it will turn up all kinds of odds and ends, some of which may be in the ballpark, some of which may not. If you want to find references to "machine tools" and "carpentry tools," you can enter "machine carpentry tools" and get a listing that might include "machines," "carpenter," "carpentry equipment," "tool-and-die machinery," and anything else that can be linguistically connected to the original phrase.

Because everything in the database is, so to speak, always on-line, *Info-XL* can be thought of as an interactive "point-and-shoot" data-retrieval system. For instance, by putting the cursor on a name, you can immediately access all data related to that name. There's a hypertext feel to this feature. It's easy to see how the program could be used in project planning and project modeling.

At $295, *Info-XL* isn't dirt cheap, but considering what it does, it's not expensive either. The only cost, however, isn't in dollars. Users of conventional database management systems will have to learn new ways of dealing with their data. It is true that you can learn the "mechanics" of *Info-XL* in short order, but it will take much longer to learn to truly control the program and make it useful to you. Although the manual has most of the raw information you need, it's not well organized, and there's no on-line help.

*Info-XL* grows on you; I can see how it could become addictive. The combination of interconnected fixed-field and free-form data accessible through the Proximity-Scan data retrieval system makes it eminently attractive to academicians and teachers, as well as to those in sales. *Info-XL* could be the best piece of software around for classroom record keeping and scheduling. Certainly its usefulness goes far beyond the classroom, but I think it should be given a careful examination by teachers.

—HENRY BEECHHOLD

### Joe Spreadsheet

HARDWARE REQUIREMENTS: 320K IBM PC, 512K Macintosh
PUBLISHER: Holt, Rinehart & Winston, (212) 614-3365
PRICE: $50
OVERALL RATING: Very Good

Spreadsheet software for novices usually cuts so many corners that graduating to a major program such as Lotus *1-2-3* is just like restarting. Not so with *Joe Spreadsheet* (Snoopy sunglasses not included). *Joe* offers 8,192 rows and 256 columns (more than 2 million cells). It uses Lotus-like menus and one-key commands and creates *1-2-3*-compatible files, which means that users who outgrow *Joe* can move on with ease. However, this software is so good that many users won't outgrow it at all.

*Joe* lets you automate your worksheet with macros just like those in the high-priced spread (in brief, macros are several commands joined into one; they help you save time and avoid errors). *Joe*'s macro language is versatile, easy to use, and again, compatible with *1-2-3*. Although you can't use one macro to call another, you can ask *Joe* to process them one step at a time so that you can edit cells as needed.

Other commands automate financial and statistical operations with built-in functions. *Joe* produces tables and performs matrix operations. Database procedures let you sort textual or numeric data, select items, and display results in a table.

It's easy to make mistakes when creating and editing any spreadsheet. *Joe* alerts you to circular references—formulas that indirectly rely on themselves for input. However, the program doesn't warn you if a formula refers to a cell containing the wrong kind of information (text instead of numbers), a situation that can arise if you copy a range of cells containing relative references to a new location, but forget to update the formulas. (*Joe* will happily add a number to a label and give you a number as an answer.) The screen constantly shows how much memory is left and indicates when you've run out. Don't panic if you run out of disk space—*Joe* lets you use DOS without exiting, so you can erase unnecessary files.

Good documentation helps you become familiar with commands quickly. It includes germane examples of spreadsheet features, although it won't act as a complete introduction to spreadsheets.

When we compared *Joe* with another low-priced, *1-2-3*-compatible spreadsheet (*VP-Planner*), *Joe* took 30 percent longer to recalculate a large worksheet. It doesn't automatically record macros as you work; you'll have to plan ahead and type them in cell by cell. However, *Joe*'s pluses far outnumber its minuses. Marketed as a low-cost, introductory spreadsheet, it's all that and more. This spreadsheet can accompany most of us well beyond the learning stage into real productivity.

—TAN A. SUMMERS

## EDUCATION & CREATIVITY

### U.S. Atlas Action

HARDWARE REQUIREMENTS: 64K Apple
PUBLISHER: DLM, (214) 248-6300
PRICE: $46
OVERALL RATING: Excellent

Do you know in what state the Carlesbad Caverns can be found? The Pocanos? Truckee Canyon? How about the names of the capital cities of Idaho, Iowa, and Illinois? Quickly, now!

*U.S. Atlas Action* provides an appealing game format for learning domestic geography. The directions are simple, the games varied, and the options clear and interesting. The first time I played, another teacher kept looking over my shoulder, then got hooked. The game kept our interest for more than an hour even though we were at the end of a tiring school day.

When demonstrating the program to my teenagers that evening,

I found myself engrossed for another two hours. I emerged more knowledgeable about mountains and rivers, major landmarks, birthplaces of famous people, and regional affiliations than I had been at daybreak. Other sessions refreshed my recall of state abbreviations, capital cities, and nicknames, and convinced me that we had just acquired an excellent addition to our game collection.

Additional selections for all maps can be created with the Editor. This feature makes the program a more interesting challenge for most players. From an educational standpoint, preparing your own maps for others to use, which incorporates the higher-level thinking skills of application, analysis, and synthesis, is more valuable than simply demonstrating knowledge through memorization and recall as other geography games often require.

*U.S. Atlas Action* was clearly designed for the classroom, since it includes teaching objectives and a full student records system. However, the game is enjoyable enough to be used by a family; it can be played competitively or alone. Players control game play with such options as response time, run time, number of players, and sound. In a one-player game, the joystick can be used, but the keyboard controls are quite comfortable and don't slow down the play.

From the response at our house, I'd guess most kids past the sixth grade will enjoy playing *U.S. Atlas Action*, and few adults will be able to ace any of the games.

—MARLENE BUMGARNER ELTGROTH

## ENTERTAINMENT

### The Bard's Tale III

HARDWARE REQUIREMENTS: 64K Apple, C 64/128
PUBLISHER: Electronic Arts, (415) 571-7171
PRICE: $50
OVERALL RATING: Excellent

Who's to say that 20 years from now, there won't be an ivy-covered museum whose exhibits are dedicated to the great works of software from the past? In this hypothetical museum, I am confident that alongside all the *Zorks*, *Ultimas*, and *Wizardrys*, will be *The Bard's Tale III*, for it is truly a masterpiece.

Veteran designers Michael Stackpole, Brian Fargo, and the rest of the folks at Interplay were just getting warmed up with *The Bard's Tale(s) I* and *II*. In the third epic, the software design house has achieved a compelling balance of game features that make playing accessible to first-time dungeon delvers and more experienced knights-of-the-realm.

Starting from the introductory screens, you are immediately drawn into a scintillating and constantly unfolding plot. The famed city of Skara Brae lies in magical ruin. To remove the curse, you and your band of hearty companions must traverse time and space to conquer the responsible party—none other than Tarjan, the Mad God.

Rich graphics, superb puzzles, a smooth interface, and hordes of bloodthirsty creatures all combine into an unparalleled computer role-playing experience. As you play,

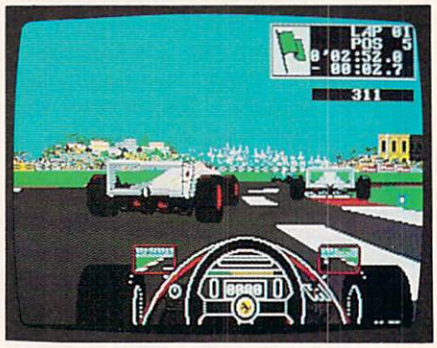
you'll come to know the daring deeds of the hero Hawkslayer (who might join your party) and encounter the carnage wrought by the wizard Cyanis (who was driven mad for the love of Alliria). And that's only the beginning. Every character has his or her own story to tell. In your struggle to overcome Tarjan, you'll become an active part of these stories in which only *you* can determine the outcome.

And to further aid your quest, *The Bard's Tale III* comes with automatic mapping. The musty corridors are every bit as arduous to traverse, but now you can find your way around without straining your eyes reading badly smudged graph paper. With seven dimensions to conquer and 84 dungeon levels, you can use all the help you can get.

—JEFF DONAHUE

### Ferrari Formula One

HARDWARE REQUIREMENTS: 512K Amiga
PUBLISHER: Electronic Arts, (415) 571-7171
PRICE: $50
OVERALL RATING: Excellent




A Ferrari. It's a car many of us dream of driving. Now we all have the chance with *Ferrari Formula One*, a new racing simulation.

In this action-packed, yet realistic game, you race a $400,000 Formula One racing car through 16 of the world's most famous tracks. Your Ferrari F186 has all of the controls and parts of the authentic car, and dazzling graphics make you feel as if you're really driving.

Indeed, *Ferrari Formula One* has super-realistic driving and shifting action, and even the garage work—such as finding the correct fuel mixture and checking the wind resistance—feels real. It's detailed and researched to the last spark plug.

You start off the game in the paddock area of Fiorano, your test track, where you have such facilities as a wind tunnel, a transport truck to take you to any of the 16 tracks, and a garage. It's in this paddock where you'll make most of the adjustments to your car and prepare yourself for the racing adventure of a lifetime.

After finding just the right combination for your car and testing it out, you'll want to begin your racing career. First, select a track by clicking the transport icon in Fiorano's paddock, and then click the Race Control icon at the track you have selected.

Once you begin your season as a racing car driver, you are in for the driving simulation experience of your life. As you speed around corners at 200+ miles per hour, you'll be sure that you really could win the Monaco Grand Prix.

—ADAM SHERWIN

AUGUST

# THE PROGRAMMER

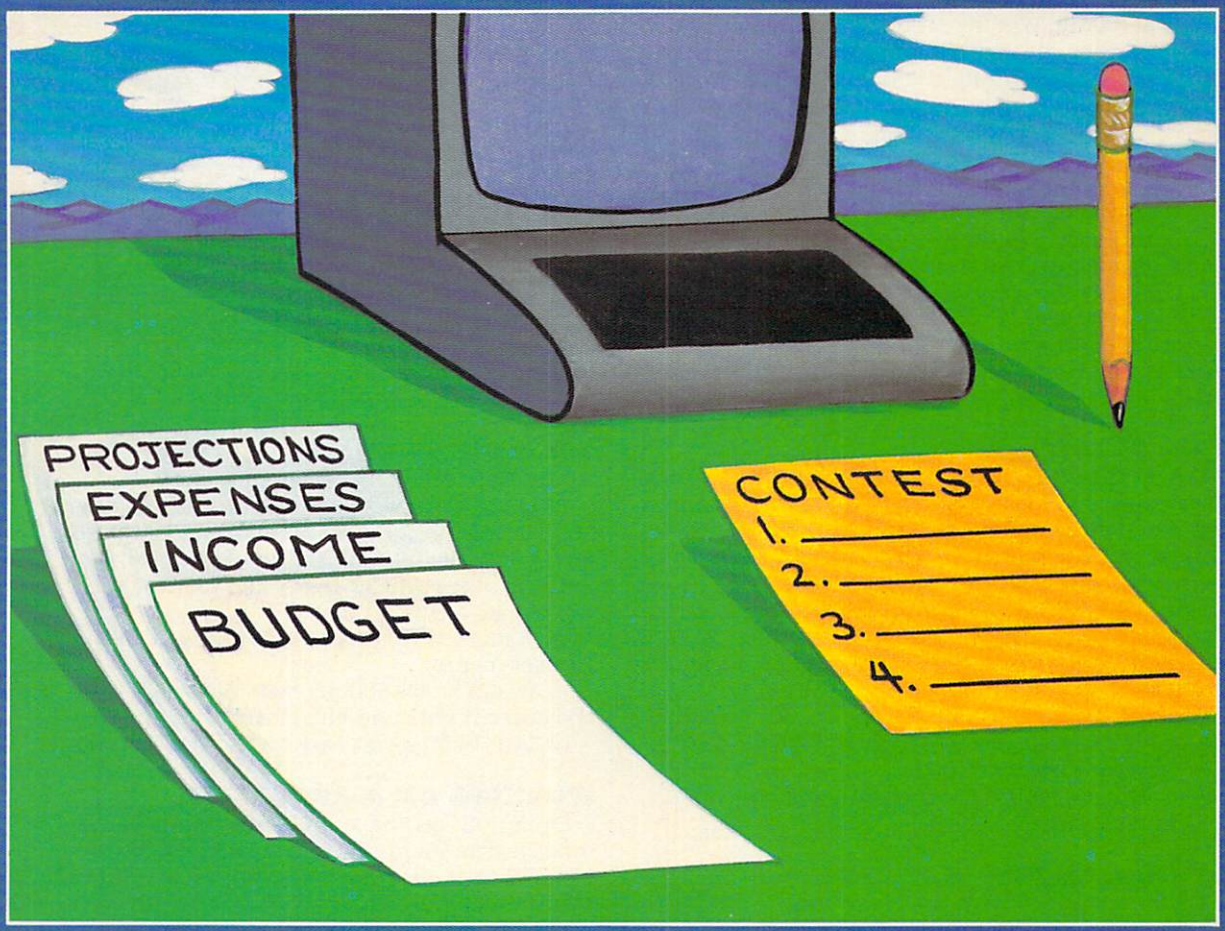



ILLUSTRATION BY BARTON STABLER

## CONTENTS AND COVERAGE

**FYI** Page 66
News for programmers and "Tips to the Typist."

**PRODUCTIVITY** Page 60
At last, a tool to help you plan your budget—and stick to it: our *Monthly Personal Budget Planner* program.

**CONTEST WINNERS** Page 64
You'll be amazed at how much power the winners of our *Short-Short Program Contest* packed into a couple of lines of BASIC.

### IMPORTANT NEWS

This issue marks the end of an era. Starting with the September issue, FAMILY & HOME-OFFICE COMPUTING will become HOME-OFFICE COMPUTING. *(For more, see Editor's Note, page 1.)* This is the last Programmer section that will appear in the magazine. The pages now devoted to programs will be devoted to an expanded product reviews section and a variety of new features and departments geared more specifically to the needs of people who work at home and to the evolving needs of our readers.

The Programmer holds many fond memories for us. We hope it has been as much fun for you to use our special blue section as it has been for us to produce it.

Thanks go to Barton Stabler and Josh Gosfield, the two artists who have enlivened the pages of The Programmer with their original work since the very first issue in September 1983. We would especially like to thank you, our readers, for your continued interest and support.

Best of luck in all your programming endeavors.

—THE TECHNICAL STAFF: Lance Paavola, Steven C.M. Chen, Pasquale M. Cirullo, Joey Latimer, Marie Alvich, Jeff Donahue

# MONTHLY PERSONAL BUDGET PLANNER

BY STEVEN C.M. CHEN

Keeping track of your cash flow and all your expenses can be a real hassle. Whether you try to remember your budget or whether you write everything down on scraps of paper, you're still running the risk of either forgetting a few things or misplacing those valuable pieces of paper.

If you can't figure out where your money went or how you're going to afford that new car or laser printer you'll discover that this month's program, *Monthly Personal Budget Planner*, is for you. Its menu-driven system will help you project your income and plan your monthly spending and savings. Then you can keep track, month by month, of how closely you're sticking to your budget. And if storing all this information exclusively on your computer is worrisome or impractical for you, you can produce printouts at any time.

## GETTING STARTED

*Monthly Personal Budget Planner* is both a planning and a tracking tool. First you define categories and insert estimated amounts for your monthly income, expenditures, and savings. Second, you enter in the actual amounts you earn, spend, and save.

To begin, type in the program in BASIC and SAVE it. Because of its length, be especially careful when typing. When you are ready to use the program, LOAD it into BASIC and RUN it.

The program begins by asking you the year you'd like to work on. If you have already created a file for that year, the program will load the file and allow you to work on it. Otherwise the program will show you the Create a Budget menu.

## CREATING A BUDGET

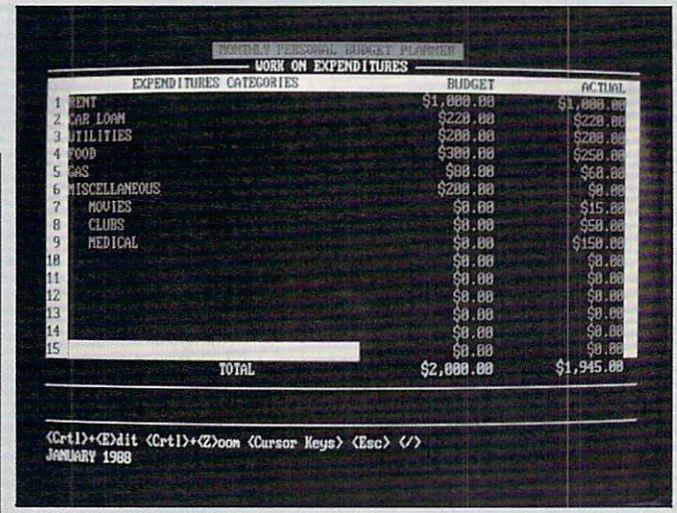
The Create a Budget menu has four choices:

‹1› DEFINE CATEGORIES FOR INCOME
‹2› DEFINE CATEGORIES FOR EXPENDITURES
‹3› DEFINE CATEGORIES FOR SAVINGS & CASH
‹4› EXIT TO MAIN MENU

Choosing ‹1›,‹2›, or ‹3› will advance you to a Define Categories work screen, where you may create a budget template for Income, Expenditures, or Savings & Cash. All three work screens will look and work the same way.

Here there will be two columns: one labeled Category and one labeled Budget. A highlight bar (or an underline on a monochrome monitor) will indicate your current position. What you do is simple. Say, for example, that you are defining Income categories. Under Category you could type: Net Salary. When you press the RIGHT-ARROW,the highlight bar moves to the Budget column. Here you could enter 1700 (or whatever your monthly salary is). Commands that are available to you are displayed across the bottom of the screen and are described in the *COMMANDS* section below.

When you are through defining categories, ‹ESC›ape to the Create a Budget menu. The menu will now have additional options for displaying or printing a monthly budget summary and for saving the current budget and exiting to the Main Menu.




## THE MAIN MENU

The Main Menu, presents four choices:

‹1› ERASE FILE FOR 1988 AND CREATE A NEW FILE. Lets you start over by getting rid of anything you have entered for 1988 (or whatever year you are working on) and beginning a new file for that year. You will then return to the Create a Budget menu.

‹2› WORK WITH 1988 BUDGET. Brings you to the Work on a Budget menu.

‹3› SELECT A NEW BUDGET YEAR. Saves all work done on the current year and opens the files for a new year.

‹4› QUIT. Brings you back to the BASIC prompt.

## WORKING ON A BUDGET

Option ‹2› on the Main Menu brings you to the Work on a Budget menu. Here you will be asked to either select a month of the year to work on or ‹ESC›ape back to the Main Menu. After choosing a month, you will see the following choices:

‹1› WORK ON INCOME
‹2› WORK ON EXPENDITURES
‹3› WORK ON SAVINGS & CASH

Any of these first three options will bring you to a Work on a Budget work screen. Here you can enter in your actual figures for income, expenditures, and savings.

‹4› DISPLAY MONTHLY SUMMARY. Shows you how much you budgeted for income, expenditures, and savings; how much you actually made, spent, and saved; and the net amounts for each main category.

‹5› PRINT MONTHLY BUDGET SUMMARY. Prints all of this information.

‹6› EXIT & SAVE CURRENT MONTHLY BUDGET. Saves the current monthly budget you are working on and brings you back to the Work on a Budget menu, where you can choose another month to work on.

After choosing to work on income, expenditures, or savings and cash (options ‹1› through ‹3›), you will see a work screen very similar to the one you used when you created the budget, but with one major difference:

the addition of a new column called Actual—where the actual amounts you earn, spend, or save are entered and displayed. With this information you can see how close you are to your budgeted figures. Editing and cursor-movement commands are displayed across the bottom of the screen and are described in the *COMMANDS* section below.

## COMMANDS

The following commands are available to you on the Create a Budget work screens and the Work on a Budget work screens.

**‹ESC›ape.** Takes you back to the previous menu and also lets you abort from editing categories without making any changes.

**‹CTRL› + ‹E›dit.** Lets you edit entries that you've already made. Make sure the category you wish to edit is highlighted. You cannot insert characters using this command—you must first delete the characters using the BACKSPACE key and then retype the remaining part of the line.

**‹CURSOR KEYS›.** Move the highlight bar around the screen.

**‹/›.** Brings you to a subcommand level with the following commands:

**‹C›alculate.** Calculates totals for the month.

**‹D›elete.** Deletes an entire row. (Create work screens only.)

**‹E›rase.** Erases an entry.

**‹I›nsert.** Inserts a row above the highlight bar. (Create work screens only.)

**‹CTRL› + ‹Z›oom.** This command appears only on the Work on Expenditures screen. It allows you to zoom in on any Expenditure entry and enter in up to 30 dates and amounts for a specific category.

Here's how it works. Say, for example, you have defined Business Lunches as an expenditure category. If you had more than one business lunch this particular month, you will have more than one amount to enter. So with the highlight bar on the Business Lunches category, hold down the ‹CTRL› key and then press ‹Z› and a screen labeled Entries For "Business Lunches" will appear. Here you can enter the date and amount of each of your business lunches. All the commands mentioned above (for example, ‹C›alculate and ‹CURSOR KEYS›) are still available. *(Note that the category total, but not the individual entries, input with the ‹CTRL› + ‹Z›oom command will be printed out when the* PRINT MONTHLY BUDGET SUMMARY *option is chosen.)*

## REMEMBER . . .

To minimize problems when saving or loading files, always keep a disk in your disk drive when using *Monthly Personal Budget Planner*. Remove the disk only when you have exited the program.

Also, always leave the program first through the EXIT option (on the Create a Budget menu or the Work on a Budget menu) and then through the QUIT option of the Main Menu. You risk losing some or all of your data if you do it any other way.

And finally, we offer a few bits of advice. Make a separate disk for each year you work on. This isn't essential but it could save you some trouble if your files become too large. Also, don't forget to make backup copies of your files after entering any significant amount of information. These backup files, which should be on their own disks, will be invaluable if anything should happen to the original disks.

—INTRODUCTION BY MARIE ALVICH and JEFF DONAHUE

### IBM PC & compatibles/*Monthly Personal Budget Planner*

```
10 DEF SEG:DEFINT A,D-Z:DEFDBL C:DEF SEG=&H40
20 IF (PEEK(&H10) AND 48)=32 THEN SA=4:SB=3:SC=2:SD=1:
SE=4:SF=2 ELSE SA=10:SB=0:SC=9:SD=0:SE=10:SF=0
30 DEF SEG
40 DIM CT$(3,15),DC$(4),MO$(12),MSG$(17),NM$(31)
50 DIM BE(2,450),CS(3,3),CV(3,2,15),FL(3)
60 DIM XP(4),YP(300),ZL(4),ZX(4):KEY OFF:COLOR ,0
70 LOCATE ,,0:WIDTH 80:WIDTH "LPT1:",80:E$=CHR$(27)
80 DA$=STRING$(75,45):F$="$$###,###,###.##"
90 F1$="$$###,###.##":RE$=CHR$(13):SP$=CHR$(32):ZF=0
100 FOR L=1 TO 12:READ MO$(L):NEXT L:FOR L=1 TO 4
110 READ DC$(L):NEXT L:FOR L=1 TO 17:READ MSG$(L)
120 NEXT L:FOR L=13 TO 17:T$=MSG$(L)
130 MSG$(L)=T$+SPACE$(51-LEN(T$)):NEXT L:NM$(0)="__"
140 FOR L=1 TO 31:IF L<10 THEN T$=SP$ ELSE T$=""
150 NM$(L)=T$+MID$(STR$(L),2):NEXT L
160 FOR L=1 TO 15:YP(L)=L+3:YP(L+15)=YP(L):NEXT L
170 FOR L=1 TO 4:READ XP(L),ZX(L),ZL(L):NEXT L
180 FOR L=1 TO 3:READ FL(L):NEXT L
190 GOSUB 3000:YS$=MID$(DATE$,7):GOSUB 3100
200 PRINT "Is this correct? ";
210 GOSUB 3200:PRINT K$:IF K$="Y" THEN 260
220 LOCATE 6,1
230 INPUT "What year is this budget for";YS$
240 T=INT(VAL(YS$))
250 IF T<1900 OR T>2500 THEN BEEP:GOSUB 3000:GOTO 220
260 MS=1:YR$=RIGHT$(YS$,2)
270 ON ERROR GOTO 300
280 OPEN "MPB"+YS$+".JAN" FOR INPUT AS #1
290 CLOSE#1:ON ERROR GOTO 0:GOTO 360
300 CLOSE#1:ER=ERR:RESUME 310
310 ON ERROR GOTO 0:IF ER=53 THEN 330
320 COLOR 28:GOSUB 3310:GOSUB 3400:GOTO 270
330 GOSUB 3000:BEEP:PRINT "There is no budget file for
```


# SOFTWARE INFORMATION

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CIRCLE READER SERVICE 15

```
 ";YS$;" on this disk."
340 PRINT:PRINT "Do you wish to create one?"
350 GOSUB 3200:IF K$="Y" THEN CLS:GOTO 450 ELSE 190
360 SL=0:GOSUB 3000
370 PRINT "Would you like to ...":PRINT
380 PRINT TAB(4);"<1> ERASE FILE FOR ";YS$;" AND CREAT
E A NEW FILE":PRINT
390 PRINT TAB(4);"<2> WORK WITH ";YS$;" BUDGET"
400 PRINT:PRINT TAB(4);"<3> SELECT A NEW BUDGET YEAR"
410 PRINT:PRINT TAB(4);"<4> QUIT":PRINT
420 PRINT TAB(4);"Selection:"
430 GOSUB 3220:MS=VAL(K$)
440 ON MS GOTO 450,490,190,2200:BEEP:GOTO 430
450 NF=0:FOR L=1 TO 3:FOR X=1 TO 3:CS(L,X)=0:NEXT X
460 FOR Y=1 TO 15:CT$(L,Y)="":FOR X=1 TO 2
470 CV(L,X,Y)=0:NEXT X,Y,L:FOR L=1 TO 300
480 BE(1,L)=0:BE(2,L)=0:NEXT L:GOTO 680
490 NF=-1:GOSUB 3300:LOCATE 23,1
500 PRINT "Press <ESC> for main menu.":LOCATE 4,1
510 GOSUB 3100:PRINT "Budget for which month ..."
520 PRINT:FOR L=1 TO 12
530 PRINT TAB(4);"<";CHR$(64+L);"> ";MO$(L):NEXT L
540 PRINT:PRINT TAB(4);"Selection:"
550 GOSUB 3200:M=ASC(K$)-64:IF M=-37 THEN 360
560 IF M<0 OR M>12 THEN BEEP:GOTO 550
570 GOSUB 3300:ON ERROR GOTO 640
580 PRINT "Loading budget for ";MO$(M);"."
590 OPEN "MPB"+YS$+"."+LEFT$(MO$(M),3) FOR INPUT AS #1
600 FOR L=1 TO 3:INPUT#1,CS(L,1),CS(L,2)
610 FOR Y=1 TO 15:INPUT#1,CT$(L,Y),CV(L,1,Y),CV(L,2,Y)
620 NEXT Y,L:FOR L=1 TO 450:INPUT#1,BE(1,L),BE(2,L)
630 NEXT L:CLOSE#1:ON ERROR GOTO 0:GOTO 680
640 PRINT:BEEP:ER=ERR:EL=ERL:RESUME 650
650 ON ERROR GOTO 0:COLOR 28
660 IF MS=1 THEN GOSUB 3310 ELSE PRINT "Unable to load
 budget file for ";MO$(M);"."
670 GOSUB 3400:GOTO 570
680 GOSUB 3300:PRINT "Would you like to ...":PRINT
690 FOR L=1 TO 3:PRINT TAB(4);"<";CHR$(48+L);"> ";MSG$
(10+MS);MSG$(L):PRINT
700 NEXT L:T=4:FOR L=4-NF TO 4-NF*3
710 PRINT TAB(4);"<";CHR$(48+T);"> ";MSG$(L):PRINT
720 T=T+1:NEXT L:PRINT TAB(4);"Selection:":GOSUB 3500
730 GOSUB 3220:SL=VAL(K$)
740 IF SL<1 OR SL>4-NF*2 THEN BEEP:GOTO 730
750 SL=SL+NF*(SL>3)
760 ON SL GOTO 770,770,770,360,1600,1760,2080
770 HP=1:VP=1:YT=1
780 IF MS=1 THEN HM=3:HL=2 ELSE HM=4+(SL=2):HL=3+(SL=2
)
790 NF=-1:GOSUB 3000:T$=MSG$(10+MS)+MSG$(SL)
800 GOSUB 3600:COLOR SA,SB:PRINT SPC(79)
810 LOCATE 3,XP(1)+9:PRINT MSG$(SL);SP$;DC$(1)
820 FOR L=2 TO 2-(MS=2):LOCATE 3,XP(L)+10:PRINT DC$(L)
830 NEXT L:FOR Y=1 TO 15:PRINT NM$(Y);SPACE$(77)
840 NEXT Y:COLOR 2,0:GOSUB 3700:GOSUB 5000:GOSUB 3500
850 MP=13+(MS=2)*(SL=2)*3:GOSUB 3800
860 IF HP=1 THEN T$=CT$(SL,VP) ELSE C=CV(SL,HP-1,VP):T
$=MID$(STR$(C),2+(C<0))
870 DK=0:COLOR SC,SD:GOSUB 3900:COLOR 2,0
880 GOSUB 3220:IF LEN(K$)=1 THEN 910
890 GOSUB 4000:IF DK=0 THEN BEEP:GOTO 880
900 GOSUB 3900:GOSUB 4100:GOTO 860
910 IF K$=E$ THEN COLOR 10:GOSUB 5050:GOSUB 3900:GOTO
680
920 IF K$<>"/" THEN 1080 ELSE MP=15-(MS=2)*2:GOSUB 380
0
930 GOSUB 3200:CP=INSTR(E$+"CDEI",K$)
940 IF CP=0 THEN BEEP:GOTO 930
950 IF MS=2 AND (CP=3 OR CP=5) THEN BEEP:GOTO 930
960 ON CP GOTO 850,970,980,1020,1030
970 COLOR 10:GOSUB 5050:GOTO 850
980 IF VP=15 THEN 1060
990 FOR Y=VP TO 14:CT$(SL,Y)=CT$(SL,Y+1)
1000 CV(SL,1,Y)=CV(SL,1,Y+1):NEXT Y
1010 CT$(SL,15)="":CV(SL,1,15)=0:GOTO 1070
1020 CT$(SL,VP)="":CV(SL,HP-1,VP)=0:GOTO 850
1030 IF VP=15 THEN 1060
1040 FOR Y=15 TO VP+1 STEP -1:CT$(SL,Y)=CT$(SL,Y-1)
1050 CV(SL,1,Y)=CV(SL,1,Y-1):NEXT Y
1060 CT$(SL,VP)="":CV(SL,1,VP)=0
1070 YT=VP:GOSUB 5000:GOTO 850
1080 IF K$=CHR$(5) THEN H$=T$:GOTO 1560
1090 IF K$<>CHR$(26) THEN 1540
1100 IF MS=1 OR SL<>2 THEN BEEP:GOTO 880
1110 ZF=-1:GOSUB 3000
1120 T$="ENTRIES FOR "+CHR$(34)+CT$(2,VP)+CHR$(34)
1130 GOSUB 3600:TX=HP:TY=VP:GOSUB 3700:PP=VP*30-30
1140 VP=1:HP=1:COLOR SA,SB:LOCATE 3,1:FOR L=1 TO 2
1150 PRINT SPC(5);"DATE";SPC(8);"AMOUNT";SPC(3);
1160 NEXT L:PRINT SPACE$(27):FOR L=1 TO 15
1170 PRINT NM$(L);SPC(24);NM$(L+15);SPACE$(51):NEXT L
1180 COLOR ,0:GOSUB 3510:COLOR 2:YT=1:GOSUB 4200
1190 MP=13:GOSUB 3800
1200 C=BE(HP,VP+PP):IF HP=1 THEN T$=NM$(C) ELSE T$=MID
$(STR$(C),2+(C<0))
1210 DK=0:COLOR SC,SD:GOSUB 4260:COLOR 2,0
1220 GOSUB 3220:IF LEN(K$)=1 THEN 1250
1230 GOSUB 4000:IF DK=0 THEN BEEP:GOTO 1220
1240 GOSUB 4260:GOSUB 4300:GOTO 1190
1250 IF K$<>E$ THEN 1270
1260 GOSUB 4230:HP=TX:VP=TY:YT=1:ZF=0:GOTO 780
1270 IF K$<>"/" THEN 1420 ELSE MP=15:GOSUB 3800
1280 GOSUB 3200:CP=INSTR(E$+"CDEI",K$)
1290 IF CP=0 THEN BEEP:GOTO 1280
1300 ON CP GOTO 1190,1310,1320,1360,1370
1310 GOSUB 4230:GOTO 1190
1320 IF VP=30 THEN 1400
1330 FOR L=PP+VP TO PP+29:BE(1,L)=BE(1,L+1)
1340 BE(2,L)=BE(2,L+1):NEXT L
1350 BE(1,30)=0:BE(2,30)=0:GOTO 1410
1360 BE(HP,VP)=0:GOTO 1190
1370 IF VP=30 THEN 1400
1380 FOR L=PP+30 TO PP+VP+1 STEP -1:BE(1,L)=BE(1,L-1)
1390 BE(2,L)=BE(2,L-1):NEXT L
1400 BE(1,VP)=0:BE(2,VP)=0
1410 YT=VP:GOSUB 4200:GOTO 1190
1420 IF K$<>CHR$(5) THEN 1450
1430 IF VAL(T$)=0 THEN H$="":T$="" ELSE H$=T$
1440 GOTO 1470
1450 IF K$<SP$ THEN BEEP:GOTO 1220
1460 H$=T$:T$=K$:GOTO 1480
1470 IF HP=1 AND VAL(T$)<10 THEN T$=MID$(T$,2)
1480 GOSUB 6000:LOCATE 21,1:PRINT SPC(79)
1490 IF K$=E$ THEN 1220
1500 C=VAL(T$):IF HP=2 THEN 1530
1510 C=ABS(C):IF C>31 THEN BEEP:C=0
1520 T$=NM$(C)
1530 BE(HP,VP+PP)=C:GOSUB 4260:GOSUB 4300:GOTO 1190
1540 IF K$<SP$ THEN BEEP:GOTO 880
1550 H$=T$:T$=K$
1560 GOSUB 6000:LOCATE 21,1:PRINT SPC(79)
1570 IF K$=E$ THEN 880
1580 IF HP=1 THEN CT$(SL,VP)=T$ ELSE CV(SL,HP-1,VP)=VA
L(T$)
1590 GOSUB 3900:GOSUB 4100:GOTO 850
1600 GOSUB 3000:T$=MSG$(5):GOSUB 3600
1610 PRINT:T$=STRING$(41-34*(MS=2),196)
1620 GOSUB 3500:FOR L=2 TO MS+1-(MS=2)
1630 LOCATE 5,XP(L)-4-LEN(DC$(L)):PRINT DC$(L):NEXT L
1640 PRINT T$:FOR L=1 TO 3
1650 CS(L,3)=CS(L,1)-CS(L,2):NEXT L
1660 FOR L=1 TO 3:PRINT TAB(2);MSG$(L);SP$;STRING$(22-
LEN(MSG$(L)),46)
1670 FOR X=1 TO MS-(MS=2):LOCATE 6+L,XP(X+1)-20
1680 PRINT USING F$;CS(L,X):NEXT X,L
1690 PRINT T$:PRINT TAB(12);"NET"
1700 FOR X=1 TO MS:IF C<0 THEN COLOR 12 ELSE COLOR 10
1710 LOCATE 11,XP(X+1)-20
1720 PRINT USING F$;CS(1,X)-CS(2,X)-CS(3,X)
1730 NEXT X:COLOR 2:LOCATE 14,1
1740 PRINT "Press <ENTER> to continue."
```

```
1750 GOSUB 3220:IF K$=RE$ THEN 680 ELSE BEEP:GOTO 1750
1760 GOSUB 3000:T$=MSG$(6):GOSUB 3600
1770 PRINT "Press <ENTER> when printer is ready or <ES
C> to exit."
1780 GOSUB 3220:IF K$=E$ THEN 680
1790 IF K$<>RE$ THEN BEEP:GOTO 1780
1800 ON ERROR GOTO 2040
1810 LPRINT TAB(25);"BUDGET FOR ";
1820 IF MS=1 THEN LPRINT YS$ ELSE LPRINT YS$;SP$;MO$(M
)
1830 LPRINT:FOR L=1 TO 3:T$=MSG$(L)+SP$+DC$(1)
1840 LPRINT SPC(10);T$;SPC(43-LEN(T$));DC$(2);
1850 IF MS=2 THEN LPRINT SPC(10);DC$(3) ELSE LPRINT
1860 LPRINT DA$:FOR Y=1 TO 15:T$=CT$(L,Y)
1870 LPRINT NM$(Y);SP$;T$;SPACE$(40-LEN(T$));
1880 FOR X=1 TO 1-(MS=2):LPRINT USING F$;CV(L,X,Y);
1890 NEXT X:LPRINT:NEXT Y:LPRINT DA$
1900 LPRINT TAB(20);"TOTAL";SPC(19);USING F$;CS(L,1);
1910 IF MS=2 THEN LPRINT USING F$;CS(L,2) ELSE LPRINT
1920 LPRINT:LPRINT:NEXT L:LPRINT
1930 LPRINT TAB(29);"BUDGET SUMMARY FOR ";YS$
1940 LPRINT:LPRINT TAB(28);:FOR L=2 TO MS+1-(MS=2)
1950 LPRINT SPC(16-LEN(DC$(L)));DC$(L);
1960 NEXT L:LPRINT:LPRINT DA$
1970 FOR L=1 TO 3:CS(L,3)=CS(L,1)-CS(L,2):NEXT L
1980 FOR L=1 TO 3:LPRINT TAB(2);MSG$(L);SP$;STRING$(25
-LEN(MSG$(L)),46);
1990 FOR X=1 TO MS-(MS=2):LPRINT USING F$;CS(L,X);
2000 NEXT X:LPRINT:NEXT L:LPRINT DA$
2010 LPRINT TAB(12);"NET";SPC(13);:FOR X=1 TO MS
2020 LPRINT USING F$;CS(1,X)-CS(2,X)-CS(3,X);
2030 NEXT X:LPRINT:GOTO 680
2040 BEEP:ER=ERR:EL=ERL:RESUME 2050
2050 ON ERROR GOTO 0:GOSUB 3310:COLOR 2
2060 PRINT "Press any key to try again."
2070 GOSUB 3200:GOTO 1760
2080 GOSUB 3000:T$=MSG$(7):GOSUB 3600
2090 IF MS=1 THEN MA=1:MB=12 ELSE MA=M:MB=M
2100 ON ERROR GOTO 640
2110 FOR MM=MA TO MB:LOCATE 4,1
2120 PRINT "Saving budget for ";MO$(MM);".";SPC(3)
2130 OPEN "MPB"+YS$+"."+LEFT$(MO$(MM),3) FOR OUTPUT AS
 #1
2140 FOR L=1 TO 3:WRITE#1,CS(L,1),CS(L,2)
2150 FOR Y=1 TO 15
2160 WRITE#1,CT$(L,Y),CV(L,1,Y),CV(L,2,Y):NEXT Y,L
2170 FOR L=1 TO 450:WRITE#1,BE(1,L),BE(2,L):NEXT L
2180 CLOSE#1:NEXT MM:ON ERROR GOTO 0
2190 IF MS=1 THEN 360 ELSE 490
2200 GOSUB 3000:BEEP
2210 PRINT "Are you sure you want to quit?"
2220 GOSUB 3200:IF K$<>"Y" THEN 360
2230 CLS:KEY ON:COLOR 7:END
3000 CLS:COLOR SE,SF:LOCATE 1,24
3010 PRINT " MONTHLY PERSONAL BUDGET PLANNER "
3020 COLOR 2,0:PRINT:RETURN
3100 PRINT "Current budget year is ";YS$;"."
3110 PRINT:RETURN
3200 GOSUB 3220:IF LEN(K$)=2 THEN RETURN
3210 KA=ASC(K$):K$=CHR$(KA-(KA>96)*(KA<123)*32):RETURN
3220 K$=INKEY$:IF K$="" THEN 3220 ELSE RETURN
3300 GOSUB 3000:T$=MSG$(MS+7):GOSUB 3600:PRINT:RETURN
3310 PRINT "I'm getting error";ER;"in line";STR$(EL);"
.":RETURN
3400 COLOR 2:PRINT:PRINT
3410 PRINT "Press <ENTER> to try again or"
3420 PRINT "<Q> to quit and to correct the problem."
3430 GOSUB 3200:IF K$=RE$ THEN RETURN
3440 IF K$<>"Q" THEN BEEP:GOTO 3430 ELSE CLS:END
3500 IF MS=1 THEN RETURN
3510 COLOR 14:LOCATE 24,1:PRINT MO$(M);SP$;YS$;
3520 COLOR 2:RETURN
3600 T$=SP$+T$+SP$:T=INT((79-LEN(T$))/2)
3610 COLOR 3:LOCATE 2,1
3620 PRINT STRING$(T,196);T$;STRING$(79-LEN(T$)-T,196)
3630 COLOR 2:RETURN
3700 LOCATE 20,1:COLOR 3:PRINT STRING$(79,196)
3710 PRINT:PRINT STRING$(79,196):RETURN
3800 COLOR 7:LOCATE 23,1:PRINT MSG$(MP)
3810 COLOR 2:RETURN
3900 LOCATE YP(VP),XP(HP)
3910 IF HP=1 THEN PRINT T$;SPC(40-LEN(T$)):RETURN
3920 PRINT USING F$;VAL(T$):RETURN
4000 DK=INSTR("KMHP",MID$(K$,2)):RETURN
4100 HP=HP+(DK=1)-(DK=2):VP=VP+(DK=3)-(DK=4)
4110 HP=HP+((HP=HM)-(HP=0))*HL
4120 VP=VP+((VP=16)-(VP=0))*15:RETURN
4200 T=1-(YT>15)*2:FOR L=YT TO 30:IF L=16 THEN T=3
4210 LOCATE YP(L),ZX(T)-3
4220 PRINT NM$(M);"/";NM$(BE(1,L+PP));"/";YR$;SP$;SP$;
USING F1$;BE(2,L+PP):NEXT L
4230 C=0:FOR L=PP+1 TO PP+30:C=C+BE(2,L):NEXT L
4240 CV(2,2,TY)=C:COLOR 10:LOCATE 19,30:PRINT "TOTAL"
4250 LOCATE 19,36:PRINT USING F$;C:COLOR 2:RETURN
4260 LOCATE YP(VP),ZX(HP-(VP>15)*2)
4270 IF HP=1 THEN PRINT T$:RETURN
4280 PRINT USING F1$;C:RETURN
4300 HP=HP+(DK=1)-(DK=2):VP=VP+(DK=3)-(DK=4)
4310 HP=HP+((HP=3)-(HP=0))*2
4320 VP=VP+((VP=31)-(VP=0))*30:RETURN
5000 COLOR 2:FOR Y=YT TO 15:Z$=CT$(SL,Y)
5010 LOCATE YP(Y),XP(1):PRINT Z$;SPACE$(40-LEN(Z$));
5020 FOR X=1 TO 1-(MS=2)
5030 PRINT SP$;USING F$;CV(SL,X,Y);:NEXT X,Y
5040 COLOR 10:LOCATE 19,25:PRINT "TOTAL"
5050 CS(SL,1)=0
5060 FOR Y=1 TO 15:CS(SL,1)=CS(SL,1)+CV(SL,1,Y):NEXT Y
5070 LOCATE 19,XP(2):PRINT USING F$;CS(SL,1)
5080 IF MS=1 THEN COLOR 2:RETURN
5090 CS(SL,2)=0:FOR Y=1 TO 15
5100 CS(SL,2)=CS(SL,2)+CV(SL,2,Y):NEXT Y
5110 LOCATE 19,XP(3):PRINT USING F$;CS(SL,2)
5120 COLOR 2:RETURN
6000 MP=14:GOSUB 3800:LOCATE 21,1:PRINT T$:CX=LEN(T$)
6010 IF ZF THEN CM=99999:TM=ZL(HP)+(HP<>1)*7 ELSE CM=
999999:TM=FL(HP)+(HP<>1)*10
6020 LOCATE 21,CX+1:PRINT CHR$(219)
6030 GOSUB 3220:LOCATE 21,CX+1:PRINT SP$
6040 IF LEN(K$)=1 THEN 6060 ELSE GOSUB 4000
6050 IF DK=0 THEN BEEP:GOTO 6020 ELSE RETURN
6060 IF K$<>E$ AND K$<>RE$ THEN 6090
6070 IF K$=E$ THEN MP=13+(MS=2)*(SL=2)*3:GOSUB 3800:T$
=H$:RETURN
6080 DK=4:RETURN
6090 IF K$<>CHR$(8) THEN 6140
6100 IF CX=0 THEN BEEP:GOTO 6020
6110 LOCATE 21,CX+1:PRINT SP$
6120 IF CX=1 THEN T$="":CX=0:GOTO 6020
6130 T$=LEFT$(T$,LEN(T$)-1):CX=CX-1:GOTO 6020
6140 IF K$<SP$ THEN BEEP:GOTO 6020
6150 IF HP=1 OR (ZF AND HP=3) THEN 6170
6160 IF VAL(T$+K$)>CM OR CX>=TM+3 THEN BEEP:GOTO 6020
ELSE 6180
6170 IF CX>=TM THEN BEEP:GOTO 6020
6180 T$=T$+K$:LOCATE 21,CX+1:PRINT K$
6190 CX=CX+1:GOTO 6020
7000 DATA JANUARY,FEBRUARY,MARCH,APRIL,MAY,JUNE,JULY
7010 DATA AUGUST,SEPTEMBER,OCTOBER,NOVEMBER,DECEMBER
7020 DATA CATEGORIES,BUDGET,ACTUAL,REMAINING
7030 DATA INCOME,EXPENDITURES,SAVINGS AND CASH
7040 DATA EXIT TO MAIN MENU,DISPLAY MONTHLY SUMMARY
7050 DATA PRINT MONTHLY BUDGET AND SUMMARY
7060 DATA EXIT AND SAVE CURRENT MONTHLY BUDGET
7070 DATA CREATE A BUDGET,WORK ON A BUDGET
7080 DATA QUIT,"DEFINE CATEGORIES FOR ","WORK ON "
7090 DATA <Crtl>+<E>dit <Cursor Keys> <Esc> </>
7100 DATA <Esc> <ENTER> <Cursor Keys>
7110 DATA <Esc> <C>alculate <D>elete <E>rase <I>nsert
7120 DATA <Crtl>+<E>dit <Crtl>+<Z>oom <Cursor Keys> <E
sc> </>
7130 DATA <Esc> <C>alculate <E>rase
8000 DATA 4,7,2,45,14,12,62,33,2,79,40,12,40,16,62,16
```

# SHORT-SHORT PROGRAM CONTEST

# WINNERS

Last February we asked you to enter your best and shortest original programs in our *Short-Short Program Contest*. This month, we are proud to present the winners and their creations. To see how much a few lines can do, make sure you're in BASIC, then type in and RUN, in turn, each program for your particular computer. It's quick, easy, and fun!

## GRAND PRIZE

### IBM PC & compatibles/*Banner*

Our Grand Prize winner is Robert M. Hirbernik from Pueblo, Colorado. His ingenious banner program runs under Advanced BASIC or GW-BASIC and requires a color graphics adapter and an 80-column printer with continuous form paper to work correctly. When it runs, you will see the word BANNER with a cursor below it. Make sure that your printer is on; then type the message you wish to see as a banner and press ‹ENTER›. The program will print the banner and then restart. Pressing CTRL–BREAK will stop the program.

```
1 DEFINT A-Z:S=4:SCREEN 1,0:COLOR 0,7:CLS:PRINT"BANNER
":LINE INPUT L$:M=LEN(L$):FOR I=0 TO -M*(M<41)-1:FOR J
=0 TO 7:FOR K=1 TO S:LPRINT TAB(41-S*8);:FOR L=15 TO 8
 STEP -1:LPRINT STRING$(2*S,32+10*SGN(POINT(I*8+J,L)))
;:NEXT:LPRINT:NEXT K,J,I:RUN
```

## FIRST PRIZE

### IBM PC & compatibles/299 Bytes

John Weidner from St. James, New York, sent us this challenging test of skill and coordination. To use it, you must have a color graphics adapter and Advanced BASIC or GW-BASIC. The object of this game is to make a dot that moves in a random pattern across the bottom of the screen through a slot that moves back-and-forth across the top of the screen. When you think the dot is in the correct position, you can press any key to release the dot. If you miss the slot, the computer will beep; if you make it, the program will print *WIN!* To play again, just press F2 or RUN the program again.

```
0 X=99:D=3:Y=9:CLS:SCREEN 1:DRAW"bu82l40r99":KEY OFF
1 X=X+D:IF X=99 OR X=219 THEN D=-D:X=X+9*D
2 LINE(X,18)-(X+2,18),0:V=X-9*D:LINE(V,18)-(V+2,18):IF
 A$<>""THEN L=-3:GOTO 4
3 A$=INKEY$:A=A+.3:T=SIN(A)*9+160:Y=INT(COS(A)*3)*3+99
4 Y=Y+L:PSET(O,P),0:IF POINT(T,Y)THEN BEEP:END
5 PSET(T,Y):O=T:P=Y:IF Y<9 THEN PRINT"WIN!"
6 GOTO 1
```

## SECOND PRIZE

### Apple II series/*Bird*

Jeff Baumgarten from Prairie du Sac, Wisconsin, won a second prize for this clever program, which draws a bird in continuous flight across your computer screen. Written in ProDOS BASIC 1.1, the program will flicker a bit on older Apple IIs, but on a IIGS set to fast speed, it should run smoothly.

```
10 HGR2
15 FOR A = 8 TO 259 STEP 21
20 FOR Z = -5 TO 5
25 FOR C = 3 TO 4
30 HCOLOR= C
35 HPLOT A+Z-3,98+Z TO A+Z,100+Z TO A+Z+5,99 TO A+Z+10
,100+Z TO A+Z+13,98+Z
37 FOR P = 1 TO 15:NEXT
40 NEXT C,Z
45 FOR Z = 6 TO 15
50 I = 10-Z
55 FOR C = 3 TO 4
60 HCOLOR= C
65 HPLOT A+Z-3,102+I TO A+Z,100+I TO A+Z+5,99 TO A+Z+1
0,100+I TO A+Z+13,102+I
67 FOR P = 1 TO 15:NEXT
70 NEXT C,Z,A
75 GOTO 15
```

### Commodore 64 & 128 (C 64 mode)/*Maestro*

Authored by Michael Zerbo of West Sayville, New York, this program lets you play simple melodies from your keyboard. The keys available to make music are 1–9 and A–Z. The number keys play in ascending sequence; the alphabetic keys play successively higher notes in alphabetical order. What's more, *Maestro* "records" what you play. It will play back any piece you have just performed when you press the spacebar. And, you can add more notes once you have heard the playback.

```
0 PRINT"** MAESTRO **":C=1:DIMA(999,2)
1 L=TI
2 GETZ$:IF Z$="" THEN 2
4 A(C,2)=TI-L:POKES,0
5 O=(ASC(Z$)-48)+10:IF O<1 THEN O=1
6 A(C,1)=O:IFZ$=" "THENFORY=1TOC+1:O=A(Y,1)
7 S=54273!:POKES,O:POKES+5,240:POKES+4,180:POKES+23,15
:POKES+3,17
8 IF Z$=" "THEN FORU=1 TO(A(Y,2)*10):NEXTU:POKES,0:NEX
TY
9 C=C+1:GOTO 1
```

### IBM PC & compatibles/*Zoomscape*

*Zoomscape* was designed by one of our subscribers, Faisal Chaudhry, who lives in Stroudsburg, Pennsylvania. This program presents a mesmerizing graphics display which, when complete, will disappear and begin to redraw, each time getting smaller and smaller and smaller . . . . A color monitor is recommended.

```
1 SCREEN 1,1:I=30:KEY OFF
3 A=B*I:D=0:E=199:F=0:G=319:M=G:WINDOW(G+8/5*A,E+A)-(-
8/5*A,-A):B=B+1
5 CLS:FOR X=1 TO 33:FOR C=1 TO 3:LINE (F,E)-(G,E):LINE
 (F,D)-(D,E),C:LINE(M-F,D)-(M-D,E),C:D=D+2:E=E-2:F=F+3
:G=G-3:NEXT C,X
7 FOR X=1 TO 99:LINE (F,D)-(D,E),1:LINE(M-F,D)-(M-D,E)
,2:D=D-2:E=E+2:F=F-3:G=G+3:NEXT:I=I*2:GOTO 3
```

### Macintosh/*Doodle*

Scribble to your heart's content on your computer with this *Doodle* program by Kiran Kediaya of Wheaton, Maryland. While running the program, you can draw in the on-screen window by clicking and dragging with the mouse. If you want to erase a portion of your artwork, simply double-click the mouse and drag it around.

Pressing the number keys 1–9 will change the size of the brush you are using. The larger the number, the larger your brush will be. The space bar will clear out the entire *Doodle* window and let you begin again. Pressing P will print your picture if you have a printer. Q returns you to BASIC, and if you press SHIFT–COMMAND–3, your picture will be saved to disk as a *MacPaint* file.

```
DEFINT A-Z:A$="2"
Top
E=VAL(A$)
IF E>Ø AND E<1Ø THEN
 CALL PENSIZE(E,E)
ELSEIF A$=" " THEN
 CLS:A=Ø
ELSEIF A$="P" THEN
 LCOPY
ELSEIF A$="Q" THEN
 END
END IF
CALL PENMODE((A=-1)*3+11)
IF A<Ø THEN CALL LINETO(C,D) ELSE CALL MOVETO(C,D)
A=MOUSE(Ø):C=MOUSE(1):D=MOUSE(2):A$=UCASE$(INKEY$)
GOTO Top
```

## THIRD PRIZE

### Apple II series/*Contest1.Zak*

This is a compact, low-resolution drawing program written by Zachary Nalven from San Diego, California. By using the I, J, K, L keys to move (up, left, down and right, respectively), you can create your own masterpieces on the screen. To change colors, press the C key and input the number of the color you wish to use. The H key draws a horizontal line, and the Q key will let you quit. A color monitor is strongly recommended.

```
1 GR
2 GET G$:COLOR= L:PLOT C,R
3 HOME:IF G$ = "B" THEN INPUT "COLOR = ";B:COLOR= B:FO
R I = Ø TO 39:HLIN Ø,39 AT I:NEXT I
4 IF G$ = "Q" THEN TEXT:HOME:END
5 IF G$ = "I" THEN R = R-1
6 IF G$ = "K" THEN R = R+1
7 IF G$ = "J" THEN C = C-1
8 IF G$ = "L" THEN C = C+1
9 IF G$ = "C" THEN INPUT "COLOR = ";L
11 IF C = -1 THEN C = 39
12 IF C = 4Ø THEN C = Ø
13 IF R = -1 THEN R = 39
14 IF R = 4Ø THEN R = Ø
15 COLOR= 15:IF L = 15 OR B = 15 THEN COLOR= 5
16 PLOT C,R:GOTO 2
```

### Commodore 64 & 128 (C 64 mode)/*Prime-Composite*

This program by Dale Ickes of Urichsville, Ohio, will give you all the factors of a number larger than two and inform you as to whether the number is prime or composite. (A composite number is evenly divisible by a number other than itself and one; a prime number isn't.) Simply enter a number between 3 and 32,767 at the prompt and wait for the results. The larger the number, the longer you will have to wait.

```
1 PRINTCHR$(147)
2 Z=Ø
3 INPUT"ENTER NUMBER GREATER THAN 1";A
4 FORC=A TO 1 STEP-1:IFA=<1 THEN 1
5 B=A/C:IF B=INT(B)THENPRINTB;:Z=Z+1
6 NEXT
7 IFZ>2 THEN 9
8 PRINT"PRIME":GOTO1Ø
9 PRINT"COMPOSITE"
1Ø PRINT:INPUT"WANT ANOTHER";N$
11 IF N$ <> "Y" THEN END
12 GOTO 1
```

### IBM PC & compatibles/*Graph*

David Picco from San Diego, California, devised a short program that graphs quadratic equations of the form $y=Ax^2+Bx+C$. When the program is run, you will be asked to input three numbers separated by commas (A,B, and C, respectively). After you press ‹ENTER›, the main points of the equation will be plotted on a graph and the actual equation will appear at the bottom left of the screen. The range of the graph is $-15 <= x <= 15$ and $-10 <= y <= 15$. In order to graph a linear equation, simply input a value of zero for A.

```
Ø  KEY OFF:CLS
1 LOCATE 1:PRINT"Y=AX"CHR$(253)"+BX+C":INPUT"Input A,B
,C: ",A,B,C
3 CLS:LOCATE 11,8:PRINT STRING$(64,196)
4 FOR S=1 TO 22:LOCATE S,4Ø:PRINT CHR$(179):NEXT
5 FOR X=-15 TO 15:Y=(A*(X^2))+(B*X)+C:V=ABS(Y-11):H=(2
*X)+4Ø:IF Y<11 AND Y>-11 THEN LOCATE V,H:PRINT"*"
6 NEXT
8 A$=STR$(A):B$=STR$(B):LOCATE 22:PRINT"Y ="A$"X"CHR$(
253)" +"B$"X +"C:GOTO 1
```

## HONORABLE MENTION

### Apple II series

#### *Magic Squares*

After you enter an odd number between 1 and 49, this program will generate a number square in which all columns, rows, and diagonals add up to the same number. Guy Paul Bordeleau from Malartic, Canada, sent us this interesting entry.

```
1 INPUT "ODD # ?";X:IF X/2 = INT(X/2) THEN 1
2 DIM N(75,75)
3 FOR Z = 1 TO X^2
4 IF Z = 1 THEN C = INT(X/2)+1:R = X:GOTO 1Ø
5 R = R+1:C = C+1:IF N(R,C) = Ø THEN 7
6 R = R-2:C = C-1
7 IF R > X AND C > X THEN R = X-1:C = X:GOTO 1Ø
8 IF R > X THEN R = 1
9 IF C > X THEN C = 1
1Ø N(R,C) = Z
11 NEXT:FOR R = X TO 1 STEP -1:FOR C = 1 TO X:W = N(R,
C):W$ = STR$(W):PRINT SPC(5-LEN(W$))N(R,C);:NEXT:PRINT
:NEXT
```

#### *Spelling Help*

This useful tutoring program was sent to us by Billy Lee from Winifred, Montana. The computer flashes a word that then disappears. If you type in the word correctly, a new word will appear. If not, the old one will flash again. To customize the program, you can simply replace the words in the DATA statements with words of your own choosing.

```
1 CLEAR:HOME
2 PRINT
3 READ T
4 FOR A = 1 TO 8ØØ:NEXT A:HOME
5 READ W$
6 IF W$ = "END" THEN 17
7 FOR A = 1 TO 5ØØ:NEXT A
8 LET C = C+1
9 PRINT W$
1Ø FOR A = 1 TO 1ØØØ
11 NEXT A
12 HOME
13 INPUT " ";A$
14 IF A$ <> W$ THEN PRINT "WRONG. TRY AGAIN.":GOTO 7
15 IF A$ = W$ THEN PRINT "CORRECT"
16 GOTO 4
17 PRINT "IT TOOK YOU "C" TURNS TO SPELL "T
18 PRINT "WORDS."
19 END
2Ø DATA 3,CAT,DOG,HORSE,END
```

### *Connect Dots*

Radoslaw Osada from Shoreview, Montana, sent us this version of an old favorite. The computer will ask you to input the number of dots you wish to use. You may enter any number from 2 to 9. Next, the computer will ask for the coordinates of each dot, which can range from 1–280 horizontally and 1–160 vertically. Once it has this information, the program will connect all of the dots in the order in which they were entered.

```
1 HOME:PRINT "INPUT # OF DOTS ";
2 GET A:HOME:FOR B = 1 TO A
3 VTAB B:PRINT "DOT # ";B;"       ØØØ,ØØØ"
4 NEXT B:FOR C = 1 TO A
5 VTAB C:HTAB 14:INPUT D(C),E(C):IF D(C) > 279 OR E(C)
 > 191 THEN 5
6 NEXT C:HGR2:HCOLOR= 3
7 FOR F = 1 TO A
8 FOR G = 1 TO A
9 HPLOT D(F),E(F) TO G(G),E(G):NEXT G,F
1Ø GET Z$:TEXT:RUN
```

### Commodore 64 & 128 (C 64 mode)

### *Wages*

This program will calculate a weekly paycheck after you've input an hourly wage, the number of hours worked, and the percent of tax (expressed in decimal form) that must be paid. It was written by Brett Campbell of sunny St. Petersburg, Florida.

```
1 PRINT CHR$(147):POKE 53280!,5:POKE 53281!,13
2 PRINT CHR$(30);TAB(14);"WAGES EARNED"
3 PRINT:PRINT"";TAB(13);:INPUT"HOURLY WAGE";W
4 PRINT TAB(13);:INPUT"HOURS WORKED";H
5 INPUT"          TAX(IN DECIMAL FORM)";T
6 P=W*H-(W*H)*T
7 PRINT"             PAY CHECK= $"P
8 PRINT"       (ROUND ANS. TO NEAREST CENT)
9 FOR K=1 TO 5
11 PRINT:NEXT K
15 PRINT"                1=YES,2=NO"
2Ø INPUT"                 AGAIN";A
3Ø IF A<>2 THEN GOTO 1
```

### *Math Helper*

Jason Lehr from East Aurora, New York, sent us a program that will help young children learn simple mathematics. When you run the program, you will be asked to enter a number. This number will be used to set up a range of 20 other numbers starting with the one you specified. Next, you must enter a mathematical operator: either + (addition),—(subtraction), * (multiplication), or / (division). Next, you will be asked to input a constant, which will be the number added, subtracted, multiplied, or divided by each of the numbers in the range. Last, you will be asked whether you wish to print out the results to a printer. Enter Y if you do.

```
Ø INPUT"ENTER RANGE";B
1 INPUT"FUNCTION";D$
2 INPUT"ENTER A NUMBER";A
3 C=B+19:INPUT"PRINT ON PRINTER";Z$
4 IFZ$="Y"THEN GOSUB 5Ø
5 FOR R=B TO C:IFD$="+" THEN E=R+A
6 IFD$="-" THEN E=R-A
7 IFD$="*" THEN E=R*A
8 IFD$="/" THEN E=R/A
9 PRINTR;TAB(4)D$;TAB(5)A;TAB(8)"=";TAB(1Ø)E
1Ø NEXT R:IFZ$="Y"THEN PRINT#4:CLOSE 4:END
5Ø OPEN4,4:CMD4:RETURN
```

### *Commands*

Terrence Halloran of Garden Grove, California, submitted this handy machine-language program. After you run this program, you'll have two powerful new C-64 BASIC commands, SYS 680 and SYS 723 ("load" and "call," respectively). These let you load and call subprograms written in BASIC without overlaying your main program. For example:

```
SHUFFLE = 192
SYS 680 "CARDSX",SHUFFLE
DEAL = PEEK(2)
SYS 680 "CARDSZ",DEAL
SYS 723,SHUFFLE
SYS 723,DEAL
SYS 723,DEAL
```

These commands will load subprogram "CARDSX" at address block 192 and subprogram "CARDSZ" at the next available address block, temporarily naming them SHUFFLE and DEAL, then call the SHUFFLE subprogram once and the deal subprogram twice.

```
1Ø FORA=68ØTO749:READB:POKEA,B:NEXT
2Ø DATA169,1,162,8,160,,32,186,255,32,87,226,32,,226,1
34,44,142
3Ø DATA192,2,169,,141,,,162,1,164,44,32,213,255,2ØØ,13
2,2,32,51
4Ø DATA165,169,8,133,44,96,32,,226,165,123,72,165,122,
72,165,58
5Ø DATA72,165,57,72,169,141,72,169,,133,122,134,123,76
,174,167
```

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### THE SYSTEMS WE TEST ON

Every FAMILY & HOME-OFFICE COMPUTING program is thoroughly tested before publication. The exact systems we use during the testing process are listed here. Although you can be sure that a program will work if your system matches ours, a comparable system configuration should also work. For example, even though we do not test on the Franklin Ace, Apple programs should work on this system. Systems that do not have a specific printer listed were tested with Epson FX-80 printers when printer options were available.

**Apple IIe** in 40-column mode w/64K RAM, DOS 3.3, two disk drives, MPC parallel-printer interface, monochrome and color monitors. Apple programs should also work on Apple II/c/Plus/GS and under ProDOS. **Commodore 128** in C 64 mode with two 1571 disk drives, color monitor, and Micrografix parallel graphics interface. Programs should also work on Commodore 64/64C/128D. **IBM PC** w/640K RAM, Disk BASIC D2.00, IBM Monochrome Display and Printer Adapter, monochrome monitor, IBM Color/Graphics Monitor Adapter, RGB monitor, AST Sixpack Plus, and IBM PC DOS 3.10. Should also work on IBM PC*jr* and IBM PS/2 Models 25 and 30. **Macintosh** w/512K RAM, two disk drives, Microsoft BASIC 2.1, and ImageWriter printer. Macintosh programs should also work on 128K Mac/Mac Plus/SE/II and under Microsoft BASIC 2.0.

# TIPS TO THE TYPIST

Typing BASIC programs from FAMILY & HOME-OFFICE COMPUTING is a great way to learn about programming and get some free software to boot! But it's frustrating to type in a long program, only to find it doesn't work as it should. If you're new to typing in programs, here are some tips to help make your first experiences rewarding ones.

### BEFORE TYPING IN A PROGRAM

**1.** Check to see if it will run on your computer under a version of BASIC you have available. Also check to see if special hardware—a disk drive, joysticks, or a printer, for example—is required. Unless the program heading indicates otherwise, you can assume that a program will run under any standard version of BASIC on any standard hardware configuration of your machine. Note the following for future reference:

- A program coverage chart and a list of the exact systems we test on appear in The Programmer.
- "Apple II series" programs will run under Applesoft BASIC on the Apple II plus (w/language card), IIe, and IIc. Programs requiring a disk drive will work equally well under DOS 3.3 or ProDOS.
- IBM compatibility of BASIC programs is determined by both the hardware and the version of BASIC used. Our programs for IBM PC and compatibles are composed on IBM PC and PC*jr*s, and are tested under most versions of BASIC available for these machines. They are then tested on a variety of IBM-compatible machines under the versions of BASIC supplied with them.

**2.** If you have a disk drive, prepare ("format" or "initialize") a disk so you can save the program once you're finished typing. Your DOS (Disk Operating System) manual or disk-drive manual will tell you how.

**3.** Get your version of BASIC fired up and ready. Read the introductory chapters of your BASIC manual for instructions.

### WHILE TYPING, KEEP IN MIND THAT . . .

**1.** BASIC programs consist of "lines," each beginning with a line number (Macintosh BASIC "lines" don't need line numbers), containing letters, numbers, and punctuation marks of various kinds. Each "line" may be composed of several "statements"—instructions that tell the computer to perform various actions—and may continue over several physical lines on the page and/or on your screen.

When typing in a BASIC program, forget considerations of format and get the *content* of what you type to match the *content* of what you see on the printed page. Regardless of how margins may break up a program "line," it hasn't ended until you reach another line number or the end of the program listing. Begin typing with the line number, then continue on, typing every letter, number, space, and punctuation mark in the order it appears, ignoring margins. Where the "line" ends, there will usually be some trailing spaces (which you don't have to type in), followed by the next line number at the left margin of the listing. At this point, all you have to do is press the RETURN or ENTER key to register the "line" in memory, then continue with the next "line."

**2.** All marks in a program listing—including every letter, number, space, and punctuation mark—*mean* something to your computer. Moreover, even symbols that look very similar to you mean completely different things to the machine. For example, it is important to distinguish between "1" (number one) and "l" (small letter "L"), or "O" (capital letter "O") and "0" (digit zero). Note that zeros are slashed in listings to facilitate discrimination.

It's important, therefore, to duplicate every line exactly when typing. Otherwise you can't expect the program to work as it should, or even work at all. Even uppercase versus lowercase is important on certain computers; the words "PRINT" and "print" may mean different things.

**3.** Each computer has its own commands and keys for program "editing," and your user's manual will tell you how to use them. Besides the editing keys, there are two sure-fire ways of correcting errors in a BASIC program line. If you're just typing along and make a mistake, press the backspace-delete key (the back-arrow key on most systems) to rub out the offending character, and then continue typing. Once you've pressed RETURN or ENTER to register the line, mistakes are a little harder to fix. You must use the editing keys or type the line in again from the beginning (including the line number) and press RETURN or ENTER. The new line will replace the old one with the same line number in your computer's memory. This option is a little more work, but foolproof.

### AFTER YOU'VE FINISHED . . .

**1.** Just type RUN and press RETURN or ENTER. If you've typed everything correctly, the program should work as described.

**2.** Of course, it almost never does, not even for seasoned programmers. Typing in a program and having it run off the bat qualifies as a small miracle. Usually there are one or more mistakes, major or minor, that have slipped past your careful scrutiny and are causing your computer to do unexpected things. Not to worry. Now comes what some people consider the most enjoyable part of the programming process: a procedure called "debugging"—finding and eliminating your mistakes. To review portions of your program on the computer screen, use the LIST command as explained in your BASIC manual. If you have a printer, you might find it more convenient to print out what you've typed (check your manual for the appropriate command). Look over each section of the program carefully, preferably with someone else's help. Make sure you haven't dropped a line or a character, miscounted spaces between a pair of quotes, mistaken a comma for a period, mixed up an "O" and a zero, or (most likely) all of the above. When you find a mistake, retype the offending line from the original listing, including the line number, and press RETURN or ENTER as explained above.

Naturally, mistakes tend to occur more frequently in certain areas of a program than in others. Complicated equations are easy to foul up by dropping or mismatching parentheses or math symbols. Data statements—program lines beginning with the usual number, followed by the word DATA—are another popular trouble spot. Check them carefully. And, of course, remember to SAVE a copy of the corrected program when you're finished.

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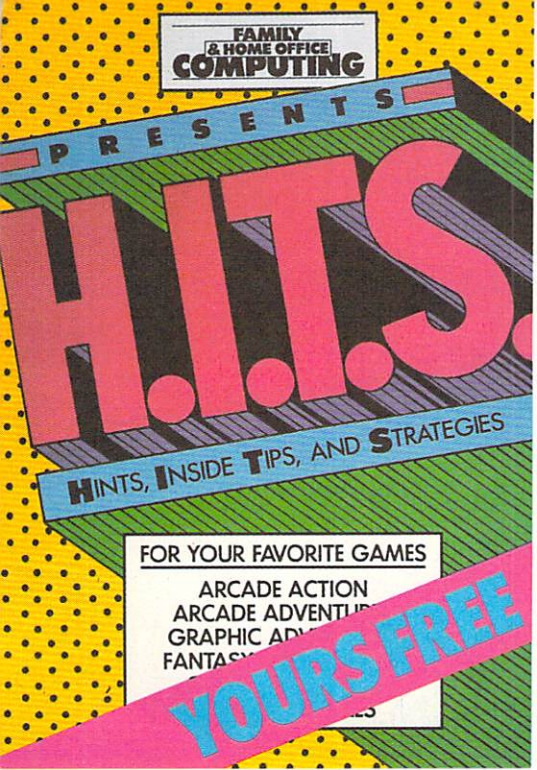


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